

EXECUTIVE SUMMARY

Analysis of Impacts and Response Strategies for the Restructuring of Shipping Alliances

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1. Background and Purpose

1) Background

- Shifting Competitive Paradigms in the Global Shipping Market and Alliance Reshuffle
- With 2025 marking the critical point of the transition, the global container shipping market is undergoing a fundamental structural transformation from the existing three major alliances (2M Alliance, Ocean Alliance, and THE Alliance) to a 3+1 structure: Ocean Alliance, Premier Alliance, Gemini Cooperation, and MSC operating independently.
- In particular, the Gemini Cooperation formed by Maersk and Hapag-Lloyd signals a shift toward service quality competition through its hub-and-spoke strategy, which reduces port calls while enhancing schedule reliability.

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- Threats and Opportunities for Busan Port and Korea's National Flag Carriers
 - Concerns have emerged that Gemini's hub-centric strategy may weaken the network connectivity of transshipment hub ports such as Busan Port and lead to the loss of transshipment cargo for Korean carriers.
 - However, new opportunities coexist through MSC's transition to independent operations as the world's largest carrier and the strategic expansion of the Premier Alliance, to which HMM belongs.
 - Therefore, empirical analysis and preemptive response strategies are urgently required to enhance the competitiveness of Busan Port and Korean national flag carriers amid rapidly changing market conditions.

2) Purpose

- This study aims to empirically analyze the impacts of the 2025 shipping alliance reshuffle on Korean national flag carriers and Busan Port in terms of network structure and actual cargo volumes, and to propose effective response measures based on these findings.
- First, quantitatively assesses changes in the global shipping network structure and Busan Port's position before and after the reshuffle through Social Network Analysis (SNA).
- Second, identify the actual impacts of alliance reshuffle on

Busan Port's transshipment volumes and national flag carriers' partnerships using Port-MIS raw data.

- Third, develop actionable policy recommendations for strengthening the network competitiveness of Korean national flag carriers and enhancing Busan Port's hub function based on the empirical findings.

2. Methodology

- This study employs a comprehensive approach integrating literature review, quantitative data analysis (SNA, Port-MIS), and qualitative analysis.
- (Quantitative Analysis) Social Network Analysis (SNA) is conducted using data from Drewry, a global shipping analytics firm, with ports designated as nodes and routes as links, to examine changes in degree, closeness, and betweenness centrality. Additionally, this study processes raw data from the Port Management Information System (Port-MIS) to analyze changes in Busan Port's transshipment volumes before and after the reshuffle (2024 vs. 2025) by alliance, carrier, and route.
- (Qualitative Analysis) The practical feasibility of quantitative analysis results is validated, and effective policy alternatives are identified through expert consultations and in-depth interviews with shipping and port sector professionals.

3. Result

1) Network Structural Changes Following Shipping Alliance Reshuffle

- Changes in Busan Port's Network Position: Overall Status Maintained Despite Emerging Efficiency Concerns
 - Social Network Analysis results indicate that Busan Port maintains its second-place global ranking in both degree centrality and betweenness centrality following the reshuffle, thereby preserving its overall standing as a hub port.
 - However, Busan Port's closeness centrality ranking, an indicator of network efficiency, fell from third place before the reshuffle to seventh place after, indicating structural vulnerability as the port shifted toward a more peripheral position in the global network.
- Impacts of Strategic Differences across Alliance Groups
 - (Gemini) Under Gemini's hub-and-spoke strategy, Busan Port's betweenness centrality ranking plummeted from second to seventh place, indicating the alliance's tendency to exclude Busan Port from its core transshipment hubs.
 - (MSC and Premier) Despite operating independently, MSC maintains Busan Port as a core hub with a second-place betweenness centrality ranking, while the Premier Alliance similarly preserves Busan Port's prominent position, together mitigating the impact of Gemini's exit.

2) Empirical Analysis of Busan Port Transshipment Volumes

- Overall Transshipment Volume Decline and Impacts on Korean Carriers
 - A comparison of the same periods before and after the reshuffle reveals that Busan Port's total transshipment volumes declined by approximately 4.4%. Notably, the volume decline for Korean carriers (-11.4%) was substantially greater than that of foreign carriers (-1.6%), demonstrating that the impact of market contraction fell disproportionately on Korean carriers.
- Polarization of Performance across Alliance Groups
 - (Gemini) The alliance's strategy to reduce port calls at Busan Port came into effect, leading to decreased volumes. In particular, Asia-Europe transshipment volumes plummeted by 96.8%.
 - (MSC) MSC was the only major carrier to experience volume growth (+92,000 TEU) and market share expansion (+2.5 %p), emerging as Busan Port's core partner.
 - Despite a 56.3% decline in HMM's volumes with existing partner Hapag-Lloyd, the carrier substantially increased its new collaboration with MSC by 85.6%, compensating for the network gap.

4. Policy Recommendations

1) Strategic Collaboration and Support to Strengthen Korean Carriers' Network Competitiveness

- Strengthening Strategic Collaboration with Foreign Carriers
 - To offset volume decreases from Gemini's departure, Korea's national flag carriers should expand vessel sharing agreements (VSA) and slot exchanges with MSC, which was identified as a core partner in the empirical analysis.
 - Korean carriers should expand supply chain coverage through collaboration on Eastern European routes (such as Poland) and new strategic routes that are difficult to enter independently.
- Advancing Collaborative Systems among Korean Carriers and Exploring New Markets
 - Through collaborative frameworks such as the tentatively named 'Korea Shipping Alliance,' Korean carriers should reduce excessive competition within the intra-Asia market and strengthen joint research and information-sharing mechanisms to develop new third-country routes.
 - The government should provide tangible participation incentives by linking financial and tax benefits to these collaborative activities.

2) Securing Overseas Core Logistics Hubs for National Economic Security

- **Supporting Acquisition of Overseas Terminal Bases**
 - To counter global carriers' vertical terminal integration, the government should apply the Framework Act on Supply Chain Stabilization Support for Economic Security to designate shipping companies as leading operators and provide financial support for acquiring terminals at major overseas hub ports.
 - To accelerate network integration, the government should prioritize brownfield approaches (equity acquisition of existing terminals) over greenfield methods (new development), which require higher initial investment.

3) Upgrading Infrastructure to Strengthen Busan Port's Global Hub Capabilities

- **Developing Eco-Friendly Bunkering Terminals and Attracting Global Terminal Operators (GTOs)**
 - To attract port calls from global carriers such as Maersk leading the eco-friendly fleet transition, the government should proactively develop bunkering infrastructure for alternative fuels including methanol and ammonia.
 - In developing Busan (Jinhae) New Port, the government should strategically attract global carriers such as MSC and Gemini as partners by offering high-efficiency automated systems and integrated hinterland services that go beyond basic cargo handling.

4) Developing and Monitoring a Shipping and Logistics Network Index

- Establishing an early warning system (EWS)
- The government should institutionalize the network analysis and cargo volume analysis conducted in this study by developing the tentatively named 'National Port Connectivity Index.' Using this index, the government should quantitatively monitor the impacts of global carriers' strategic changes on domestic ports and utilize the findings as foundational data for policy formulation.