Global Maritime Supply Chain Changes and Trends for 2025: A Compilation of References

I. Global Maritime Supply Chain for 2025: Overview of Core Changes and Trends

1. Slowing Growth Yet Rising Ton-Miles, Forced Redrawing of Trade Routes: According to reports such as UNCTAD's 2025 Review of Maritime Transport, global maritime trade will experience a phase of "low growth coupled with high uncertainty" during 2024–2025: Overall cargo volume growth will be markedly lower than during the 2010s. However, increased use of long-distance alternative routes such as rounding the Cape of Good Hope will drive continued growth in ton-miles, resulting in capacity demand outpacing pure cargo volume growth.

2. Persistent choke-point disruptions stemming from the Red Sea crisis and Panama Canal drought: The 2023–2024 Panama Canal drought and the 2024–2025 Red Sea security crisis have simultaneously crippled both the Suez Canal and Panama Canal, two vital shipping arteries. ITF/OECD estimates indicate the Red Sea incident caused container throughput via the Suez Canal to plummet by approximately 50% in Q1 2024, with numerous vessels diverting around the southern tip of Africa, extending shipping distances and causing freight rates to soar. In Panama, drought caused a significant decline in lock transits during 2023–2024. Even with water levels restored by 2025, daily throughput remains below full capacity, indicating the canal's reliability is still under reconstruction.

3. Supply growth outpacing demand: Multiple shipping brokerage and consultancy firms including BIMCO and Ti note that the peak in new container vessel deliveries during 2024–2025, coupled with early order concentration, will result in capacity supply growth significantly exceeding actual demand. Beyond the Red Sea and canal incidents, the long-term trend points to freight rates under pressure, with industry profitability returning to normal levels or even declining. Compounded by renewed tariff measures and geopolitical tensions, organisations such as Drewry project a potential 1% decline in global container port throughput by 2025 – a scenario rarely observed since 1979.

4. Accelerated Carbon Reduction Regulation: The IMO adopted its revised greenhouse gas reduction strategy in 2023, targeting net-zero emissions from international shipping by mid-century. Supporting technical and operational metrics such as EEXI and CII will progressively take effect from 2023–2024, placing pressure on older, high-consumption vessels to be phased out or operate at reduced speeds. Concurrently, dual-fuel vessels (powered by LNG, methanol, ammonia, etc.) now constitute a growing proportion of global newbuild orders. Major liner companies are actively developing "green routes" and securing zero-carbon passage quotas, while the Panama Canal will introduce net-zero passage quotas from 2025.

5. Digitalisation and Intelligence: Evolving from "Supplementary Tools" to "Infrastructure" Yet Progress Remains Uneven: The EU's Blue Economy Report 2025 indicates that despite mounting operational and environmental pressures, digitalisation within European maritime logistics remains highly uneven. In numerous ports, it is still regarded as an "auxiliary tool" rather than critical infrastructure. Recent bibliometric research indicates sustained growth in scholarly interest around technologies such as "smart ports, digital twins, blockchain, and AI-driven route optimisation" throughout the mid-2020s. The IMF has developed real-time global maritime trade forecasting models

using AIS vessel tracking and satellite data to inform macroeconomic policy. Concurrently, nations including South Korea have commenced deploying AI-controlled automated car carriers, accumulating experience for large-scale implementation around 2026.

6. The Paradigm Shift from 'Efficiency First' to 'Resilience First': Systematic reviews and multiple empirical studies underscore that traditional cost- and efficiency-driven global maritime networks have proven vulnerable amid overlapping crises of pandemic, conflict, extreme weather, and cyberattacks. Consequently, academia and policymakers are pivoting towards supply chain designs centred on "resilience and security" as core constraints. This shift encompasses multi-port strategies, alternative shipping routes, regionalised production, and nearshoring.

7. Regionalisation and Multipolarisation: Analyses by bodies such as UNESCAP indicate that the Asia-Pacific region continues to account for over 40% of global maritime trade volume and hosts nine of the world's top ten container ports. However, cargo flows are shifting from a "single transoceanic backbone" towards a "multi-node, multi-directional" pattern: increased production spillover from China to Vietnam, Indonesia, India and other nations, alongside the rising significance of north-south and intra-regional shipping routes.

8. Industry Investment Preferences: Energy Efficiency, Artificial Intelligence and Fleet Modernisation: Multiple industry reports for 2025 (such as the SMM Maritime Industry Report, Clarksons, and IUMI) collectively indicate that in their new round of investments, shipowners and shipyards are placing greater emphasis on enhancing energy efficiency, digitalisation and AI-assisted operations, and modernising fleets, rather than merely expanding transport capacity.

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