Identifying Pathways for U.S. Shipbuilding Cooperation with Northeast Asian Allies

Henry H. Carroll and Cynthia Cook

May 7, 2025





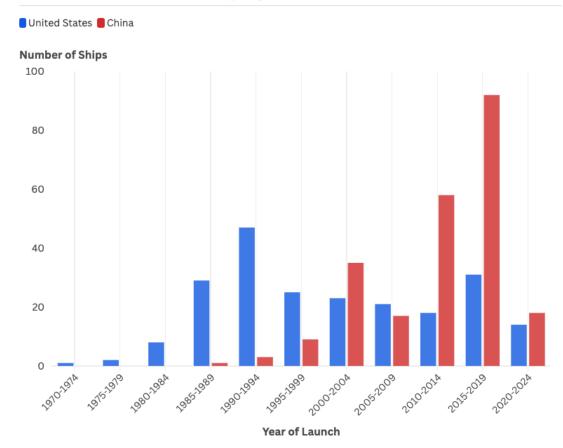
China's Rapid Naval Growth Has Exposed Critical Weaknesses in U.S. Shipbuilding

- PLAN shipbuilding pace greatly exceeds that of the U.S. Navy
- China's shipyards have gone from producing 5 percent of the world's ships in 1999 to over 50 percent in 2024

CENTER FOR STRATEGIC &

INTERNATIONAL STUDIES

Active U.S. and Chinese Warships by Launch Date



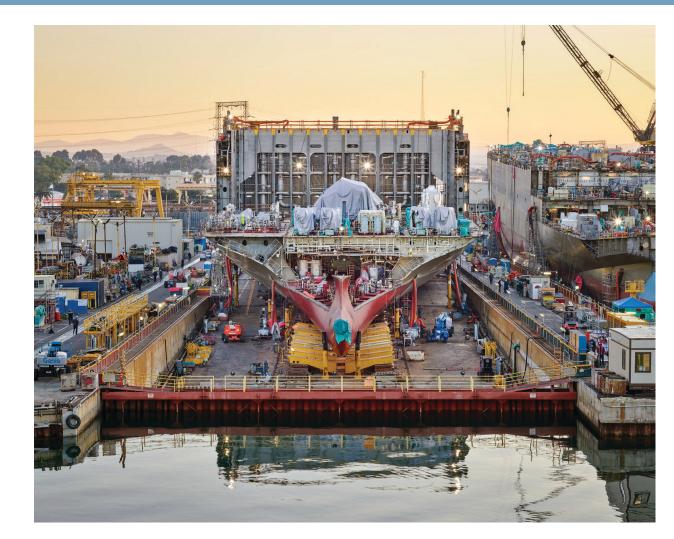
Source: Janes Fighting Ships Yearbook 23/24



Statistics from <u>The Threat of China's Shipbuilding Empire</u>, Matthew Funaiole, 2024. Fleet age data from <u>Unpacking China's Naval Buildup</u> by Alexander Palmer and Henry H. Carroll, 2024.

U.S. Shipyards Are Struggling to Build Enough Ships Fast Enough on Their Own

- Challenges include aging infrastructure, insufficient adoption of leading practices, and skilled workforce constraints skilled labor
- Difficulty expanding capacity given coastal land availability
- Limited commercial shipbuilding to support scale



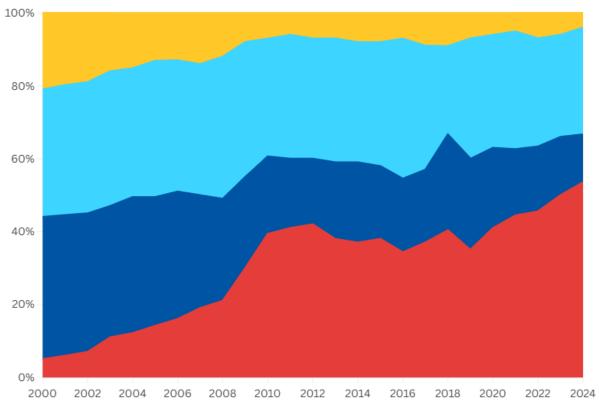


Japan and South Korea Have Industrial Capacity that the U.S. Navy Could Use

- 2nd & 3rd largest global ship producers
- Deep historical and defense ties with the U.S
- Long-term industrial planning & investment in technology
- Experience in modular and automated construction

Share of Global Commercial Shipbuilding Production, 2000-2024

💴 China 🔲 Japan 📃 South Korea 📒 ROW



Graph from <u>Ship Wars: Confronting China's Dual-Use Shipbuilding Empire</u>, Matthew P. Funaiole, Brian Hart, and Aidan Powers-Riggs, 2025.



Possible Pathways to International Shipbuilding Cooperation

- 1. Allied maintenance, repair, and overhaul of U.S. ships to free up U.S. shipyard capacity
- 2. Allied acquisition of U.S. shipyards to revitalize their production capability
- 3. Joint distributed production of warships via modular construction methods
- 4. U.S. purchase of existing allied warship designs from allied shipyards.



*Pathways are not mutually exclusive but do have interacting dynamics

Pathway 1: Allied MRO Can Boost Fleet Readiness, Relieve U.S. Yard Backlogs, and Free Up U.S. Yard Space

- U.S. Navy estimated to be 20 years behind on maintenance
- Might accelerate readiness without sacrificing new builds or capacity
- MRO cooperation already underway with Hanwha Ocean
- U.S. might be able focus more on ship construction, though conversion costs are daunting
- Economic benefit to allies unclear

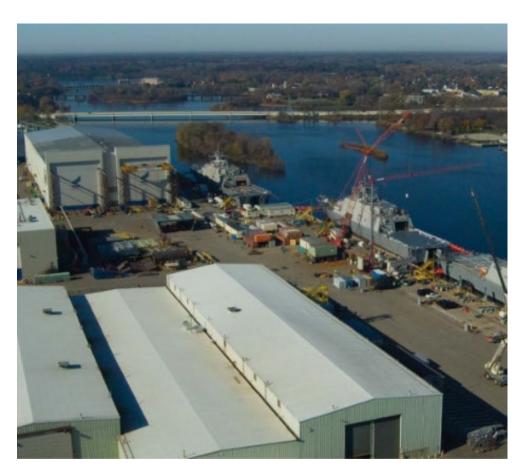




Pathway 2: Foreign Acquisition of U.S. Shipyards Can Inject Expertise and Capital

- Can take several forms:
 - International purchase of existing, operational U.S. military yard
 - International purchase and renovation of defunct or non-military U.S. yard
 - Creation of new U.S. GOCO yard with foreign shipbuilders considered in operator bidding pool
- Advantages from parent firm limited by U.S. regulations & requirements





Marinette Marine, acquired by Fincantieri in 2009. <u>Image</u> from Fincantieri.

Pathway 3: Modular Shipbuilding with Allies Can Expand U.S. Production while Including U.S. Industry

- Two major versions
 - Allied-built hulls could be completed with U.S. systems
 - Allied-built modules could be assembled with U.S.-built modules in U.S. shipyards
- Enables simultaneous use of both U.S. and allied capacity
- Modularity can also enable production in non-traditional geographies for the MIB



A Newport News Shipbuilding worker grinds on a camera foundation on board the aircraft carrier USS John C. *Stennis* (CVN-74). <u>Image</u> from USNI.

8



Pathway 4: Buying Ships from Allied Yards Could Bridge Capability Gaps Quickly

- Numerous sub-pathways:
 - allied yards building licensed U.S. designs
 - allied yards building a new co-developed design
 - the United States buying allied-built and allied-designed ships
- Interoperability and U.S. Navy standards & requirements
- Shared basis of AEGIS destroyers or less sensitive support ships
- Core concern: the health of the U.S. shipbuilding industrial base





Strategic Policy Decisions Are Needed Now to Balance Domestic and Allied Solutions

- Power domestic revitalization with allied cooperation
- Pathways are not mutually exclusive but do have interdependent effects
- U.S. is making path-dependent decisions with long-term consequences
- U.S. Navy and USG may need to better align regulations & requirements to enable allied cooperation
- Further study needed on tradeoffs and implementation of pathways

