

Weathering the Storm: Korea's Shipbuilding Industry

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Surrounded on three sides by water, Korea is an oceanic nation that depends on the import of 95 percent of its energy sources and the export of its manufactured goods via maritime routes. Maritime transport is Korea's lifeline, and between the 16th century iron-clad "turtle ships" that propelled their creator, Admiral Yi Sun-sin, and his legendary naval exploits to near-mythical status and the early 21st century next-generation super container ships spanning several football fields in length, the Korean shipbuilding industry has been a success story.

As the "Miracle on the Han River" was taking place, it seemed perfectly sensible for Korea to make shipbuilding a strategic industry in the 1970s, as shipbuilding required the employment of large numbers of workers by both ship yards and the supporting industries, including steel producers and engine manufacturers, and it generated foreign currency. After World War II, Japan had centered the reconstruction of its industry on shipbuilding, and China is currently in the process of building on the Japanese and Korean experience, developing the industry with the support of substantial investment by the state.

In developed nations, the removal of subsidies for shipbuilders has often resulted in the industry's decline, with the United Kingdom as the best known example of that trend. Due to its strategic value for developing economies in particular, over-investment and large subsidies in the shipbuilding industry in developing nations have often resulted in over-capacity, and low profit margins. Once an economy reaches a certain level of development, higher labor costs tend to result in significant loss of competitiveness and the industry's decline, as the European experience indicates. Nevertheless, due partly to auspicious circumstances, the South Korean shipbuilding industry managed to maintain its competitive edge, despite higher labor costs. After ship prices hit bottom in 2002, three factors created the conditions for a boom in the shipping industry:

First, the International Maritime Organization called for a phasing out of single-hull tankers by 2010, thus creating demand for double-hull ships, less likely to spill cargo, especially oil, in a collision, ultimately destined to become the industry standard.

Second, China's accelerated economic growth resulted in increased demand for super-cargo ships able to hold up to 10,000 containers on their decks.

Third, high demand for oil and high energy prices resulted in increased demand for new oil tankers and offshore production facilities, and also for the increased use of liquid natural gas (LNG), thus spurring demand for LNG carriers.

Korean shipyards were able to deliver super-container ships, LNG carriers, and offshore oil production facilities, and in 2004 Korea surpassed Japan as the world's largest shipbuilding nation. Before the current turmoil, Korea became home to seven of the world's top ten ship yards, Korean yards accounted for over two thirds of worldwide orders for LNG carriers, almost 65 percent of mega container ships, and over 40 percent of very large tankers. Korean dry docks had a backlog of orders of up to three years, and Hyundai Heavy Industries, Daewoo Shipbuilding and Marine Engineering, and Samsung Heavy Industries became the dominant players in the market for mega-container ships, giant tankers, and the latest LNG carriers. The Korean shipbuilders' capacity to recruit enough young ship design engineers was better than Japan's, thus allowing Korea to stay in the lead in the industry. The efficient ship-manufacturing process employed in Korea ensured that shipbuilders stayed ahead of another challenger, China, engaged especially in the construction of bulk carriers and small tankers. Korean shipbuilders assemble key segments of the vessel into modular blocks, including piping and interior facilities, before transporting them to a dry dock for assembly, thus significantly improving productivity.

According to data recently released by Bloomberg, quoting Clarkson Plc, the top shipbroker, Korean shipyards had backlogs of \$212.4 billion in late October 2008, or 38 percent of the \$556.7 billion worth of worldwide global orders. Despite the current global turmoil and owing in large part to outstanding contracts, signed before the global crisis, between January and October 2008, Korean exports of ships increased by 56 percent to \$34.2 billion. Korean shipbuilders, in particular Hyundai and Samsung, are expected to deliver ships worth \$53 billion in 2009.

It may seem that Korean shipbuilders have little to worry over the short run, but, over the long run, after years of unprecedented growth, the South Korean shipbuilding industry will have to brace itself to weather the storm ahead. The current global economic slump has resulted in a dramatic drop in new shipbuilding orders. Hyundai, Daewoo, and Samsung, the world's three biggest shipbuilders, are likely to sail through the sharp slump in global shipping orders. However, small and medium sized shipbuilders are in a more precarious position, and the Korea Federation of Banks

recently held a meeting with representatives of troubled shipyards to address the government's approach to providing a solution to the liquidity problem companies are facing. A fast-track program intends to provide liquidity to smaller exporters affected by exchange rate-inflicted losses. While this program may rescue some firms, the restructuring of firms beyond immediate rescue may also be needed.

If Korea's shipbuilders weather the storm, and the world gets beyond the current crisis, destiny may once again smile upon Korea's ship yards. As the world searches for alternative sources of energy, liquified petroleum gas (LPG) consumption as a bridge between the energy of the present and that of the future may once again spike, resulting in increased demand for LNG carriers, and Korean shipbuilders could no doubt capitalize on that development.

As the United States pays increased attention to a New Energy for America plan under a new administration, the value of shipping may be rediscovered. Shipping requires no investment in infrastructure such as highways or rails, and fuel costs per ton transported via ship are relatively low. Nevertheless, foreign shipbuilders including Korean firms may have to wait before having a chance to become involved in reviving the U.S. merchant fleet, which represented about one third of the world's merchant fleet 60 years ago, but now is down to only 2 percent of the world's total. The main obstacle to that involvement, possibly also one of the greatest obstacles in the way of the revival of the U.S. merchant fleet, is represented by the Merchant Marine Acts of the 1920s and 1930s. Meant to protect the U.S. shipbuilding industry, those acts decree that only ships built in the United States, operated by U.S. crews, owned by U.S. companies, and flying the American flag can load or unload at two or more consecutive American ports. As long as the acts are still in force, it will be impossible for Korean shipbuilders to play a role in American coastal shipping.