

## Vietnamese shipbuilding industry: Opportunities and Challenges

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**Abstract:** With a 3,200 km coastline and low labor costs, Vietnam has a great potential for developing the shipbuilding industry. However, due to poor infrastructure and rudimentary technology, the shipbuilding industry is still in its early stages of development. Vietnam has more than 60 shipbuilding and repair facilities under the Ministry of Defense, the Ministry of Fisheries and the Ministry of Transport. The Ministry of Transportation owns the largest volume, accounting for over 70% of the industry's shipbuilding capacity. Most of the products of domestic shipyards are offshore fishing vessels and offshore fishing vessels. Domestic shipyards are now capable of producing 6,500 DWT cargo ships. The number of small oil tankers, dredgers and passenger ships is also increasing. Smaller domestic vessels have been exported to neighboring countries such as Laos, Cambodia and China. Domestic shipyards are capable of repairing vessels up to 50,000 DWT. Over the past three years, the government has promoted investments in a package to boost the sector's performance through the Shipbuilding Industry Development Program 2010-2020. The government has also decided to make the shipbuilding a export industry spearheaded. As a result, as of 2003, the shipbuilding industry has achieved domestic sales of \$251 million and \$71 million from exports and is expected to increase total sales to \$ 5.11 billion by 2010.

**Keywords:** shipbuilding industry, opportunities, challengers

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### 1. Introduction

After a long period of crisis, Vietnam's shipbuilding industry is recovering. However, there are still many difficulties and challenges as the world's shipbuilding market has not really escaped from it. "According to statistics, Vietnam has about 120 shipyards, repairing ships with a tonnage of over 1,000 tons, with 170 launching and launching works. Total designed capacity of the plants is about 2.6 million tons per year, but the actual capacity is only 800,000 - 1 million tons per year. The Vietnamese shipbuilding industry has been heavily invested since 2002 and is in the process of being transferred from major shipping hubs in Asia. Currently, in addition to Vinashin, which was established in 2006 (now the Shipbuilding Industry Corporation - SBIC), as the core, Vietnam's shipbuilding industry has shipyards owned by the Corporation. Vietnam Marine (Vinaline), Vietnam National Oil and Gas Group and other state corporations and corporations, shipyards under management of Ministry of National Defense, local enterprises and FDI enterprises.



Figure 1. Shipbuilding companies need to improve their organizational structure, strengthen the brand, and aim for long-term and sustainable development

Along with the crisis of global shipbuilding industry, Vietnam's shipbuilding industry has experienced some ups and downs over time. The breakdown of Vinashin has caused the shipbuilding industry, together with

tens of thousands of workers, to fall into ruin when a series of small and large shipyards in Vietnam were canceled, lacking jobs. Determining the importance of this industry, the Government is determined to direct the restructuring of the shipbuilding industry vigorously. For Vinashin (now SBIC) from 2010 to 2015, it was the period the corporation, they must focus on restructuring, handling bad debt. This period has encountered many difficulties due to foreign partners cancel the contract, the traditional customer is Vietnam National Shipping Lines (Vinalines) also halted the project of packing tens of ships ... So far, with great support from the State, SBIC has been doing re work. The structure and have escaped the risk of bankruptcy. According to Ngo Tung Lam, Deputy General Director of SBIC, some time ago, some shipbuilding projects including construction or re-launching of shipyards were restarted, especially SBIC and its member companies. Copper shipbuilding for overseas makes the hope of recovery more fundamental. According to the SBIC leadership, in 2015, the whole company has deployed 254 products, including 15 fishing vessels, 20 fishing vessels, 143 other products and inland waterway vehicles ..., has delivered 178/254 products Gross profit of the corporation is more than 1,000 billion VND.

Nam Trieu Shipyard (Hai Phong) has also restored shipbuilding capacity of 56,000 tons and continues to make some large vessel products and search for new ship owners. Mr. Dang Van Canh, general director of Ben Thuy Shipbuilding One Member Co., Ltd. said that his company specializes in shipbuilding such as ships, passenger ships, towing and shipbuilding of up to 7,000 tons. However, through the difficult times, the project has stagnated, the operation of enterprises almost stopped, so far the company has been expanding the product category, going into other areas such as yachts, ships fish shell steel, new material shell. The company is also preparing to sign two shipbuilding contracts of 3,000 tons.

It can be said that the maritime world, including maritime corporations in the world have been interested in Vietnam for two reasons. Firstly, Vietnam is a market for marine equipment and ships with a population of nearly 100 million. Secondly, Vietnam is a manufacturing and shipbuilding country, with a rich history and workforce, relatively low labor costs and a thriving workforce. Although there are many issues that need to be tried, but it is a young and significant workforce, so the world is very interested in Vietnam's shipbuilding industry. Shipbuilding industry is very important, first of all country case. Given the low profitability, countries in the world are required to equip the shipbuilding industry with the strength of its maritime power, in order to serve the defense of the country, especially one country. maritime families. The characteristics of the shipbuilding industry require very high investment and low efficiency, so the role of the State is to invest a lot, so the shipbuilding market must be paid special attention to the construction of the ship. Defending the sea, creating a strong fleets for transport, travel of the people such as tourism, fishing ... and if the excess is new for export. In the past we have been planning a bit too ambitious, we want to be the world's fourth largest shipbuilder and shipbuilder in the world, and that ambition has led to failure in the past.

## 2. Opportunities and challengers

A long coastline with an EEZ of more than 1 million square kilometers, it is one of the 10 nations with the highest coastline in the east, south and southwest. Vietnam has always been identified as a favorable location for developing shipbuilding. In addition, the Marine Strategy of Vietnam until 2020 has identified the marine economy as a driving force to attract and promote other areas to develop, creating a fundamental and comprehensive transformation of the marine economic structure towards the public. Industrialization, modernization and an important solution for the implementation of the Marine Strategy to 2020 are the development of the shipbuilding and repair industry. With the increasing demand for transportation in the course of Vietnam's deep integration into the international economy, these are the opportunities and potential for the shipbuilding industry to recover and develop sustainably.

By the end of 2014, the Government issued the Shipbuilding Industry Development Action Plan on the basis of strategic cooperation with Japan. With this plan, the Government is determined to achieve the goal of making shipbuilding a key industry in the implementation of the Marine Economics Strategy. Accordingly, it will focus on the production of a number of products suitable to the development conditions of Vietnam and establish trust in the world market. Vietnam is a country with a high quality shipbuilding industry. The increase in the output value of the whole industry reached 5-10% per year. It is no coincidence that Vietnam's shipbuilding market has been receiving the attention of many countries, shipping companies, including major powers and shipbuilding corporations. Damen, a major Dutch shipbuilder, has invested \$ 60 million to build Damen - Cam River shipbuilding joint venture. According to JF Van Drenth, director of technical cooperation of the Damen Group, from 2003 to date, Damen has built more than 100 ship products of all kinds at the Cam River Shipyard in close cooperation between the two. sharp. With high skill and good management, Cam River Shipyard has fulfilled its commitment to quality standards by Damen, ensuring the progress and delivery time of the ship ... According to Damen representative, this company is in the process of discussing the next investment

at Ben Kien (Hai Phong) of Song Cam Shipyard. The specific information has not been represented by Damen, but the level of investment can also be equivalent to the previous period.

Many experts from countries with large shipbuilding industries in the world such as Norway, Poland, Japan, South Korea ... stated that the world shipbuilding industry has not escaped the situation, at least by 2014. Freight prices by sea decreased; Reduced ship prices, the phenomenon of contract cancellation, time divert ship. The number of new shipbuilding orders, especially those of general use such as bulk carriers, oil tankers, and container ships continue to decline; Shipbuilders face a very competitive situation, facing the pressures of restructuring and the changing environmental friendliness of world maritime conventions. The tendency of the world market, with supply-demand imbalances, also presents challenges, but also offers new opportunities for the shipbuilding industry. According to Andrew Westwood, vice president and director of business development for the Asia-Pacific region, the surplus will continue for another 3-4 years due to the volume of ships in some countries. overloaded (like China); Orders from Korea, China continue to decline; Some countries continue to build ships serving the domestic demand such as Brazil ... are no small challenges to the development of the world shipbuilding industry, and Vietnam is no exception. Along with the rapid development of China over time, the growth of emerging economies in Asia has brought about the emergence of middle classes in China, India, and elsewhere. pushing consumer demand - shipping, buying more goods. We need to monitor this development as it may be a condition for the emergence of bulk carriers, container ships.

On the other hand, with increasing demand for energy, it will boost the shipping market and tankers in deeper, more remote areas. Specifically, the world's energy consumption will increase by 36% by 2035. Countries using coal and oil all increase (except for some OCD countries).

Along with that, the renewable energy industry is also getting more and more interested ... All that shows both opportunities and challenges for the shipbuilding industry. It's not just the need for oil tankers in new oilfields, or the ships that can run in cold regions, icebreakers ... but also fuel-efficient and environmentally-friendly ships. "The tanker market will have a chance. With the cost of using oil more and more expensive, there are also oil tankers in new oilfields, which are expected to increase from \$ 150 billion to \$ 170 billion in the coming years. Asked about hard technology. Shipbuilders need to improve their shipbuilding in the face of rising fuel price challenges, environmental regulations, operating costs, "said Andrew Westwood.

In the same vein, Young-Bock You, Komac's Managing Director, said that the world is facing three threats: insufficient energy, expensive prices and environmental damage due to energy consumption. develop. Along with that, there are three major issues that are of global concern for the shipping industry: everything is rising, shipowners are struggling and increasingly pressure on the environment. bare. The solution is inevitably how to save energy, friendly environment. The experience of some of the world's big shipbuilding companies shows that they use new energy such as solar, renewable energy to save fuel ... " . Designs need to focus on environmentally friendly technology, energy efficiency, "Young-Bock You shared.

Young-Bock You, Managing Director of Komac, said that with the current market landscape, the latest designs need to be developed, increasing competitiveness. Some Vinashin container ships have been designed quite modernly. Important is awareness of leadership. Do you dare to face to launch these modern designs?

Vinashin has a strong brand in the world shipbuilding industry. You are also trying to improve your image in the country. The market is also moving forward, the future, the opportunity is great. We need to note, from the initial design stage, the work of savings, cost-effectiveness plays an important role. The savings from each dollar to increase competitiveness is also a noteworthy issue. "Looking to China, the size of Vietnamese shipbuilders is not as big as that of Chinese shipbuilders. However, Vinashin also has its own advantages. There is plenty of light at the end of the tunnel, "said Young-Bock You. Mr. Nguyen Quoc Anh - Deputy General Director of Vietnam Shipbuilding Industry Group - Vinashin also said that foreign shipowners, partners, foreign shipbuilders highly appreciate Vietnam's shipbuilding technology and are very interested. to the sustainable development of Vietnam shipbuilding industry. Shipbuilding recovery will only come to restructure, especially management reengineering in manufacturing. At the same time, there must be cooperation to bring out new product lines that are modern but economical and environmentally friendly.

"The future of Vietnam's shipbuilding industry is good. Of course it does not come to anyone who waits for it but must make great efforts. And competition in shipbuilding is the most intense competition. However, if we have the right marketing strategy and appropriate restructuring to exploit all our strengths. For example, if we go into the Hitech line, the line is difficult .. because our labor is not only young, trained but especially skilled. This has been appreciated by foreign shipowners. In short, Vietnam's shipbuilding industry will have a future if it sets the right priorities for it, having the right market orientation. Here, I think I should go into market share with less competition. For example, focus on hi-tech ships such as RORO, oil tankers, small chemical tankers, "he said. In fact, Vinashin has successfully closed and handed over many difficult ships. For example, in 2010, Ha Long Shipbuilding Company has built and handed over 4,900 car - one of the world's top shipbuilding vessels. Or the Pha Rung Shipyard successfully built a 34,000 tonne high-speed double-decker

bulk carrier, registered under DNV-Norway, and shipped by Ship & Shipping Magazine. The poll was voted one of the 12 best boats in 2010. Mr. Nguyen Tien Dat, Deputy General Director of Pha Rung Shipbuilding Industry Corporation, said that the opportunities are less but equally divided to all shipbuilders in the world. And the design of ships suitable for green environment and saving is indispensable trend. The capacity of the Forest Ferry can completely cover many kinds of ships. According to Mr Dat, it is important to choose well designed, suitable to customer needs, good implementation process, good quality control. Savings also determine the survival of the business and also become competitive in the product itself. "In terms of saving, I can generalize into two groups: the first is to save in production, focusing on controlling the plan. Finally, how to lower the price of the ship. Secondly, savings are made right from the design so that when customers use their ships they can save money. This will create attractive for customers to buy their products, improve the competitiveness of products," said Dat.

How to choose well-designed, appropriate to customer needs, have a good implementation process, good quality control, ensure delivery schedule and reasonable price? The majority of experts and ship owners all over the world say that Vietnam should take advantage of the labor force at both the cheap and technically skilled levels to create competitive advantage.

### ***Weak technical design***

It can be said that shipbuilders in Southeast Asia face three challenges. The first challenge is lack of profitability. Many shipyards in the area are not profitable due to their extremely small production and poor management. PT PAL of Indonesia is under contract because the Indonesian government can not commit to a long-term Navy modernization plan due to lack of funding. In 2009, PT PAL was forced to start a production rationalization process where nearly half of the company's 2,000 employees were laid off. Meanwhile, Vietnam's shipbuilding industry suffered a blow in 2010 when the Vinashin Industrial Group collapsed, with an estimated debt of \$ 4.5 billion (currently the group is in the process of restructuring. bridge).

The second challenge is corruption. In Malaysia, corruption in arms procurement has undermined national naval shipbuilding efforts. The Kedah class patrol vessel program initially had the ambition of producing 27 OPV offshore patrol vessels. However, this ambition has been hampered from the very beginning by the financial breaches leading to quality problems and time delays. The original contractor, the PSC Marine Shipbuilding Company, was found not paying some subcontractors, while being involved in embezzlement of employees' retirements. As a result, the Malaysian government requested the Boustead Shipyard to receive the PSC and terminate the project. Even then the first ship in the shipment did not pass the trials on sea trials before delivery due to technical and quality problems. Finally, the Navy's Kedah class shipbuilding program was forced to drop to six.

The third challenge is the lack of advanced technology and expertise in shipbuilding. The technology and technical capabilities of the shipyards in the area may be the biggest obstacle facing these shipyards. In most cases, shipyards are small in size, limited to the construction of patrol boats, escort ships and coastal patrol vessels. Only Singapore is the exception when it is capable of building larger ships such as destroyers or amphibious assault ships. Even so, all shipbuilding companies in the region have to import all or almost all of the systems and weapons they equip, including machinery, radar, electrical equipment, fire control, missile and naval guns. For these reasons, many regional shipyards want to cooperate with other countries to participate in larger and more complex shipbuilding projects. However, the common problem is that local shipyards do not possess sufficient labor or production skills to participate in large projects.

Therefore, although there is potential, it is unlikely that Indonesia, Malaysia, Thailand, and Vietnam can surpass their present status as small states in naval shipbuilding. Vietnam's shipbuilding industry is facing with many difficulties and constraints. First of all, according to information shared by Dam Dinh Vinh, specialist of the international shipping brokerage Maersk Broker, shipbuilding market worldwide is very fierce as demand for shipbuilding is decreasing. Prices in all segments of the ship are relatively low and shipbuilders in general are competing fiercely in all areas such as ship type, price, financial and service strategy. On internal constraints, the construction capacity of Vietnam's shipbuilding industry is currently only 30-40% of designed capacity. Support industry is very important for shipbuilding industry, but the pace of development of supporting industries is slow, investment has spread and the target of localization ratio has not been achieved. In terms of manpower, shipbuilders with international certificates are far less than required. In terms of design, according to experts, the technical design stage only meets the requirements for small, popular vessels. Vietnam does not have an international standard model test tank to develop new designs, the entire technical design of the ships are still purchased overseas. This is the weakest point of Vietnam's shipbuilding industry today and will remain a weakness in the future if there is no priority investment policy, training engineers design team.

Shipbuilders are also facing financial difficulties when lending to banks for production is almost impossible. Sharing with the Customs Newspaper, Mr. Dang Van Khanh, Deputy Head of Business Division,

Shipbuilding One Member Co., Ltd. said that the policy system for the new branch is only right in terms of policy, but implementation is still limited. Enterprises cannot borrow capital from banks. Shipbuilding requires huge capital, so almost businesses have to mobilize from ship owners, brothers, friends and suppliers of supplies. "Our good luck is that the investors determine the market very well so they pay in time, so we produce and deliver on time," Khanh said. "Although the current shipbuilding industry has not completely overcome the difficult but latent challenges, there are also opportunities. This is the time for enterprises operating in the shipbuilding industry to evaluate and perfect the organizational structure, strengthen the brand name, continue to maintain and aim for long-term and sustainable development ", Deputy Minister Transportation Nguyen Van Cong emphasized.

### 3. Conclusion

It can be said that shipbuilders in Southeast Asia face three challenges. Meanwhile, Vietnam's shipbuilding industry suffered a blow in 2010 when collapsed with debt up to \$4.5 billion. The goal of the Plan is to make shipbuilding a key industry in the implementation of the Marine Economics Strategy; Focus on producing some products suitable to the development conditions of Vietnam; Establishing trust in the world market for Vietnam is a country with a high quality shipbuilding industry. Some quantitative targets up to 2020: n The growth rate of output value of the whole industry: 5-10%; To set aside 70-80% of production capacity for domestic demand for shipbuilding, serving the economic, social, defense and security development, except for some types of ships such as submarines and cruisers. battleships, battleships, high technology and technical requirements; 3-10% for export; The number of ships exported is expected to be 1.67 to 2.16 million tons per year.

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