



Review Article

Volume 4 Issue 2 - January 2018
DOI: 10.19080/RAPSCI.2018.04.555632

Recent Adv Petrochem Sci

Copyright © All rights are reserved by Khandakar Akhter Hossain

SWOT Analysis of China Shipbuilding Industry by Third Eyes



Khandakar Akhter Hossain* and Zakaria MNG

Bangladesh Naval Academy, Marine Academy, Bangladesh

Submission: December 09, 2017 ; **Published:** January 22, 2018

***Corresponding author:** Khandakar Akhter Hossain, Bangladesh Naval Academy, Marine Academy, MIST, Bangladesh, Email: akhter.engineer@yahoo.com

Abstract

Global major shipbuilding industry already shifted to the Asian region, mainly China, South Korea and Japan; the three shipbuilding giant in the world. China has taken an effort and implements a shipbuilding strategy in the beginning of this century to establish itself as a major maritime power. It is now the world largest shipbuilder in terms of gross tonnage and value. China's shipbuilding efforts and strategy has enabled the country to make its shipbuilding industry competitive and efficient and provided an opportunity to describe how a judicious mix of public and private enterprise can kick-start an industry and establish sustainable economic boom. The products of China are used the entire world. A high rate of savings, abundant and increasingly skilled labor, healthy export business, social security and potential urban growth and reach the China at the top within 2020 leaving behind all countries in the world. China ship building continue its shipbuilding expansion on irrespective the global shipbuilding growth situation aside. The completion volume of ships in China has been increasing rapidly since the 1990s, making China one of the shipbuilding centers in the world. The biggest threats for China shipbuilding industry are from low wage shipbuilding countries like India, Philippines, Vietnam, Brazil, Bangladesh, so on. This is a research paper based mainly on primary data collected physically by researcher from China and from shipbuilding stake holders like renowned shipyards, classification societies (BV, CCS, GL, NKK, etc) and little secondary information from shipbuilding literatures. This research work mainly focuses on present world economic status, China economic status, and global shipbuilding trend, shipbuilding practice in modern days, global shipbuilding order, china shipbuilding growth and SWOT analysis of China Shipbuilding Industry.

Keywords: : Global trade; Order; Trend; Growth; Strength; Weakness; Opportunity; Threat

Introduction

About 90% of global trade in terms of value is seaborne. The seaborne trade about 7 billion tons annually; usually contributes 15% to global GDP [1]. Global major shipbuilding industry already shifted to the Asian region, mainly China, South Korea and Japan; the three shipbuilding giant in the world. China has taken an effort and implements a shipbuilding strategy in the beginning of this century to establish itself as a major maritime power. It is now the world largest shipbuilder in terms of gross tonnage and value; leaving behind both Korea and Japan. China is the world largest trading nation and World Bank estimates that, it will continue its economic development in coming future even [2]. CNN reported that Chinese total trade for 2013 reached US\$ 4.2 trillion. China overtakes USA and become top trading nation and manufacturing economy in the world in 2014. China's shipbuilding efforts and strategy has enabled the country to make its shipbuilding industry competitive and efficient and provided an opportunity to describe how a judicious mix of public and private enterprise can kick-start an industry and establish sustainable economic boom [3]. This is a research paper based mainly on primary data collected physically by researcher from China and from shipbuilding stake holders

like renowned shipyards, classification societies and minute secondary information from shipbuilding literatures. Researcher work under CSIC in a renewed shipyard (WSIC) more than three years in china and analyze the industry by physical involvement in the industry. This research work mainly focuses on present world economic status, China economic status, global shipbuilding trend, shipbuilding practice in modern days, global shipbuilding order, china shipbuilding growth and SWOT analysis of China Shipbuilding Industry. Shipbuilding industry of china is a vast and widely spread around the china coast and riverside. So it is a very complicated and challenging task for a foreigner to analyze the industry. Moreover, language barrier and access to information inside China is also a big challenge. However, everything was under reasonable control due to physical presence in China of the researcher and direct involvement to the industry for three years.

Present World Economic Situation

Recent IMF report states (January 20, 2015) that, Global growth will receive a boost from lower oil prices, which reflect to an important extent higher supply. But this boost is projected

to be more than offset by negative factors, including investment weakness as adjustment to diminished expectations about medium-term growth continues in many advanced and emerging market economies. World trade will accelerate in advanced economies, growing 3.7 percent in 2015 and 4.8 percent in 2016, up from 3.0 percent last year. But growth in trade volume will fall this year in emerging markets such as China before rebounding to expand 6.1 percent in 2016. Weaker oil prices will drag on inflation, with consumer prices rising only 1.0 percent in the advanced economies and 5.7 percent in emerging markets. Volatility in prices for oil and other resources has raised risks in global financial markets, with a potential for destabilizing outflows of money from emerging markets. Geopolitical risks such as turmoil in the Middle East and war in Ukraine remain high, though ample supplies have reduced the likelihood of serious supply disruptions. Lower oil prices could give both producing and consuming countries the leeway to enact energy reforms [4]. Eliminating subsidies may free up resources for helping the poor or building needed infrastructure. China recently reported that its economic growth slowed to 7.4 percent last year, the weakest expansion since 1990, compounding the challenges for the country's communist leaders as they try to overhaul the economy [5]. Europe, Japan and Russia are also logging slower growth, while the U.S. is a rare bright spot. The advanced economies are forecast to expand by 2.4 percent in 2015, a smidgen higher than earlier thought, and at the same rate in 2016. Growth in developing economies is forecast to slip to 4.3 percent from an estimated 4.4 percent in 2014, but then recover to 4.7 percent in 20

Introduction of Present China

China is situated in Asia. China is the largest country by population. Beijing is the capital city of China. It touches sea waters also. China mostly consists of plains. It touches the great Himalayas. It neighbors with thirteen countries like Russia, India, Pakistan are of main importance. The official religion of China is atheist. Other religions in China are Daoism, Buddhism, Christian 3%-4% and Muslim 1%-2%. There are seven languages that are spoken in the country. Mandarin is the official language spoken by the entire population. Young generation can speak English very well [4]. China is an industrial and agricultural country. The products of China are used the entire world [6]. This is achieved by the small level industrial units. These units are set up in the houses and produce products at low cost. These products are then exported. Approximately 40% of the labor force is connected with agriculture and forestry while 30% of the labor force is connected with industry. It provides great labor force needed for any industry [2]. It has a very large area which gives it diversity in the temperature and culture. Nowadays, China has become one of the world's most attractive locations and China's rise carries enormous significance for the international business communities. China has a very good development in terms of social and legal system, the size of the market, the low cost of labor and China's growth potential together offer unprecedented business opportunities for

foreign investor to do business in China. International business have developed very rapidly in China and today, China become increasingly integrated with other parts of the world and opened up to a whole range of cross-border economic activities. China is the formal member of World Trade Organization (WTO) since 2001 and from the date, China enjoyed all the rights the WTO gives to other members and full participates in WTO activities. China's entry has benefited national economy, as well as encourages global economic growth and the improvement of the multilateral trade system. WTO membership opens up China's market for more international trade and investment, and opens up the world economy for China's exports. China or Peoples Republic of China adopts socialist system or communism in their political system in their decision-making processes in governing the country. The country's sole political party in power is known as the Communist Party of China. The government has the sole power to control all activities done by their citizen as what have been describe in how communism system worked in governing a country [4]. Actually, the purposes of working in China are to contribute to the nation and also to the government as the government control on all activities in the country.

China Present Economy Situation

China's economy has experienced a strong annual GDP growth rate of average 10% during the last decade [4]. It is expected to continue its growth momentum and overtake the USA in GDP by 2020. A high rate of savings, abundant and increasingly skilled labor, healthy export business, social security and potential urban growth and reach the China at the top within 2020 leaving behind all countries in the world.

China's socialist market economy is the world's second largest economy by nominal GDP and the world's largest economy by purchasing power parity according to the IMF, the accuracy of the IMF's report on China's purchasing power parity has since been questioned. It is the world's fastest-growing major economy, with growth rates averaging 10% over the past three decades. Due to historical and political facts of China's developing economy, China's public sector accounts for more share in the national economy with the burgeoning private sector [7]. China is a global hub for manufacturing, and is the largest manufacturing economy in the world as well as the largest exporter of goods in the world leaving behind USA. China is also the world's fastest growing consumer market and second largest importer of goods keeping USA above. Services Account Balance from 2007 -2011 of China's economy has always been in slight deficit, and China is a net importer of Services products. China is the largest trading nation in the world and plays a vital role in international trade and has increasingly engaged in trade organizations and treaties in recent years. China has free trade agreements with several nations, including China-Australia Free Trade Agreement, China-South Korea Free Trade Agreement, China-ASEAN Free Trade Area, China-Pakistan, China-Bangladesh, China-Myanmar and so on. Again on a per capita income basis, China ranked 82nd by nominal GDP and 89th

by GDP (PPP) in 2013, according to the International Monetary Fund (IMF). The provinces in the coastal regions of China tend to

be more industrialized, while regions in the hinterland are less developed [7] (Figure 1).

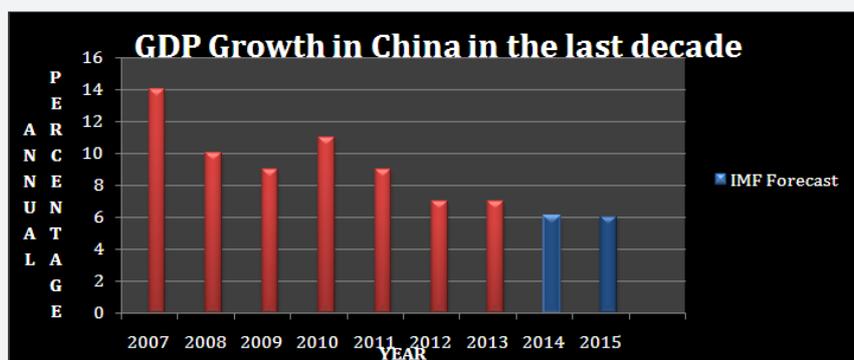


Figure 1: Trend of GDP Growth of China (forecast by IMF).

Chinese President Xi Jinping’s dream is described as achieving the “Two 100s”: the material goal of China becoming a “Moderately Well-off Society” by 2021, the 100th anniversary of the Chinese Communist Party (CCP), and the modernization goal of China becoming a Fully Developed Nation by 2049, the 100th anniversary of the founding of the People’s Republic. The internationalization of the Chinese economy continues to affect the standardized economic forecast officially launched in China by the Purchasing

Manager Index in 2005 [2]. At the start of the 2010s, China became the sole Asian nation to have a GDP (PPP) above the \$10-trillion mark (along with the United States and the European Union). As China’s economy grows, so does China’s Ren Min Bi (RMB) undergo the needs for its internationalization process. The economy of China has recently initiated Asian Infrastructure Investment Bank in 2015 (Figure 2).

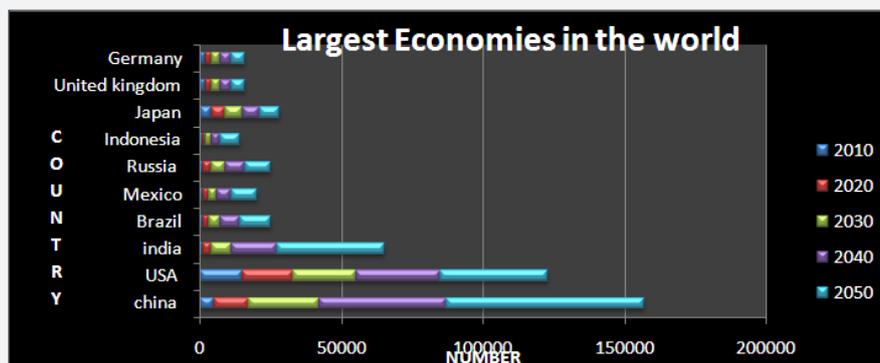


Figure 2 : The ten largest economies in the world in 2050, measured in GDP (billions of USD), according to Goldman Sachs research.

China Shipbuilding Strategy and Present State

Shipbuilding has been identified as a key sector for growth in China [8]. There has been significant capacity expansion in recent years, both through the construction of new facilities and the upgrading of existing shipyards. Like all other industries, shipbuilding has gravitated to the East over the last 40 years or so [9]. During this period, Western Europe’s shipbuilders have seen their market share eroded - first by Japan, followed by South Korea, and more recently, by China. China is making a concerted effort to establish itself as a major maritime power. It is now the world’s largest shipbuilder in terms of gross tonnage and value, leaving behind the Japan and South Korea. China’s development strategy is to change the mode of economic growth from relying on cheap labor and quantity expansion to achieving

growth by scientific and technological progress, and by improved efficiency to achieve industrial transformation. The strategy further emphasizes the need to accelerate the development of capabilities of independent innovation in advanced shipbuilding and marine equipment in order to rapidly narrow the gap with advanced shipbuilding countries and propel China into the lead. China shipbuilding has integrated military and commercial efforts [10]. Shipyards that once built only warships have turned their expertise and facilities to the construction of freighters and other vessels for commercial purposes, while continuing to build and modernize ships in response to requirements from the People’s Liberation Army (PLA) Navy and Army.

The China Shipbuilding Industry Corporation (CSIC) is one of the two largest shipbuilding conglomerates in China, in the

other being the China State Shipbuilding Corporation (CSSC). It was formed by the government on 1 July 1999 from companies spun off from CSSC. These are State Owned Enterprises (SOEs) and fall under the direct supervision of the State Council (China's Cabinet). However, more than half of the nation's ship output is actually made by the thousands of private small and medium shipyards. Such yards accounted about half of China's total ship output and around half of total ship sales in years. They also accounted for about half of the jobs in the country's shipbuilding industry [11]. The Chinese-flag merchant fleet numbers more than 2000 ships and about half of which have a displacement over 10,000 deadweight tons (DWT). China has planned to expand its fleet as its trade expands remarkably. More than 600 Chinese-flag merchant ships, carrying 30% of China's trade, are operated by a single entity: the China Ocean Shipping Company (COSCO), which is a state-owned conglomerate with close ties to Beijing's military. Table 1 below has been shown the present share of shipbuilding industry by volume in gross tons and Table 2 below has been shown the present statistics and important figure of shipbuilding industry of China in 2014.

Table 1: World shipbuilding market share by countries (2014).

Rank	Country	Combined (GT)	Percentage
1	China	6,70,00,000	45%
2	South Korea	5,30,00,000	29%
3	Japan	2,80,00,000	18%
4	Philippines	60,00,000	1%
5	European Union	45,00,000	1%
6	Rest of the world	1,10,00,000	6%

Table 2: Industry statistics & market size of china shipbuilding industry (2014).

Revenue around US\$ 80 billion.	Annual Growth average 2.5%
Profit average 10%	Direct Employment around 500,000
Total Businesses 685	Indirect Employment around 5000,000

Analysis of Global Shipbuilding Market Instability and Protective Measured by Countries

It is clearly obvious that the change of the new ship demand curve follows the sinusoidal curve; once increase and then

decrease and those up and down continue (Figure 3). The most important observation of the graph of global new order book is the cyclist movement of new orders with the time. From this graph, it has been seen that at first half cycle phase of the sinusoidal curve the demand was at the trough at 2005 and continued to rise at peak until 2007, finally then fell down at 2009. At the second half cycle phase, the demand was at the peak on 2010 and fell down on 2012. From the last half cycle phase, the demand curve rose again and reached the highest point on 2013, and then it decreased gradually. So we can predict that the ship orders or demand will increase within next few years. Besides, from this analyzing it is obvious that shipbuilding markets are always unstable; exists between hope and frustration and never remains platitude. This phenomenon is hopeful for ship building market and shipyards.

The global shipbuilding industry struggles to recover from the 2008 market slump, a group of Southeast Asian countries and few western countries are rapidly surfacing as new production hubs. By observing bar chart data in Figure 4, ship building investor; of those countries like Japan, China, Singapore, United States, South Korea, etc invest in their domestic sectors and boast up their industry and help them to survive in the global market. The shipbuilding industry was dealt a huge blow by the global economic crisis in 2008, when vessel demand decreased, dragging down prices and shortening order book covers over the following seven years. Despite big fluctuations in price and demand, the major markets - China, Japan and South Korea - remain at the forefront of the global shipbuilding and ship repair industry. There are strong reasons behind the growth of their ship building market. Financial backing of their governments, investment by the own countries, a healthy dose of foreign investment due to lower labor costs, scheduled infrastructure developments and business friendly regulations helped them to reach peak position in 2015.

Figure 5 in column chart describes the quantities of the different type of new global ship order achieved by three Asians shipbuilding giant (China, South Korea and Japan) up to April 2016. From the graph, it has been seen that Bulk Carriers market mostly dominated by China and Japan; whereas Tankers market dominated by South Korea. The most striking findings from this graph are Containers market get the least preference by those three Asian shipbuilding giant. However, Gas Carrier market is moderately dominated by those three giant. Those three countries are controlling the global shipbuilding market and almost entire commercial ship building industry.

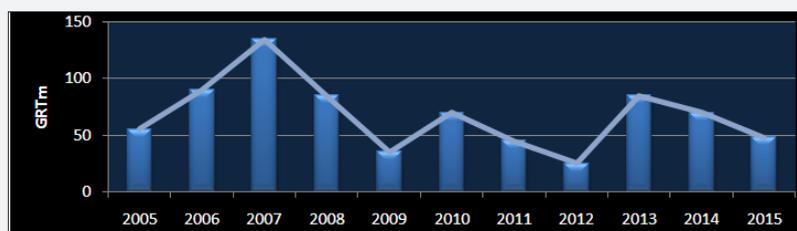


Figure 3 : Global New Ship Order Book in Million GRT in Last Decade.

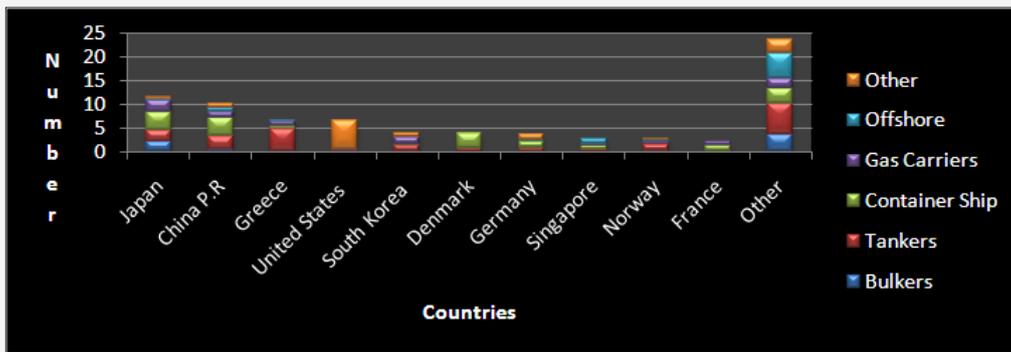


Figure 4 : Investment by the countries in their own shipbuilding industry as protective measure.



Figure 5 : World New Orders April 2016 (m GT).

Global Ship's Order and China's Shipbuilding Growth in Last Decade

In Figure 6 in graph, it has been shown the different types of global ship order in last decade. If we analyze the graph, we can find some phenomena repeat every after some years. Such that, every after 3 years some similarities has been happened. Through the year 2007 to 2009 quantity of total number of ship gradually decrease and similar situation has been observed through 2010 to 2012 and again 2013 to 2015.

China ship building market has grown up from 2008, just after the global ship building market has been grown up at the peak on the year of 2007 and that has been shown in Figure 7. China ship building continue its shipbuilding expansion on irrespective the global shipbuilding growth situation aside. China shipbuilding growth reaches their top point on 2011 and then slows down gradually up to today irrespective to the global shipbuilding fluctuated growth.

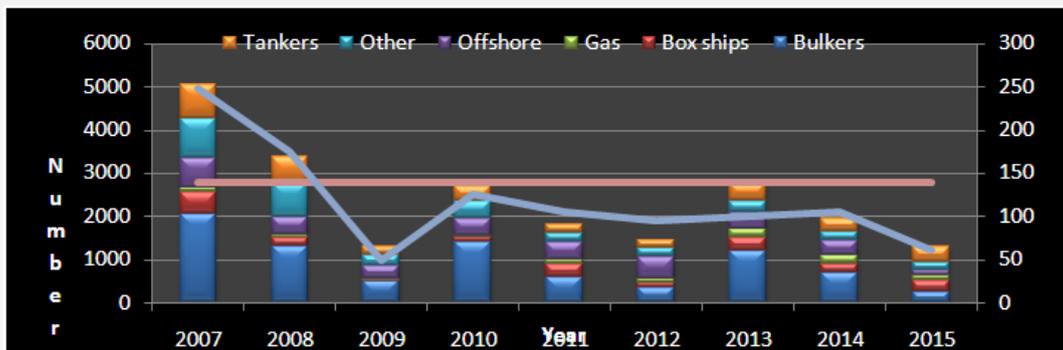


Figure 6 : Global ship order in last decade.

Brief on SWOT Analysis

A SWOT analysis (alternatively SWOT matrix) is a structured planning, method used to evaluate the strengths, weaknesses, opportunities and threats involved in a project or in a business venture or in an industry. A SWOT analysis can be carried out

for a product, industry, place or person. It involves specifying the objective of the business venture industry, or project and identifying the internal and external factors that are favorable and unfavorable to achieve that objective. A SWOT analysis is a strategic management tool meant to help a business conceptualize

different facets of its own operations. The term SWOT is an acronym of four categories are divided into external and internal analysis: strengths and weaknesses are considered internal and opportunities and threats are external. A SWOT analysis typically consists of a list of the four elements that make up its name in a side by side or box orientation for ease of comparison and analysis of any business or industry for better understanding, learning and decision.

China Shipbuilding SWOT Analysis

Strength

- 1) Status of the all industry in Chinese economy keeps rising since last three decades. Now China is the largest Industrial nation leaving USA behind marginally. As shipbuilding nation China is also number one in the world leaving behind South Korea and Japan.
- 2) The volume of completions, new orders and holding orders of ships in China remained top of the world in 2014.
- 3) Shipbuilding industry is developing speedily in China. The completion volume of ships in China has been increasing rapidly since the 1990s, making China one of the shipbuilding centers in the world.
- 4) Shipbuilding industry has greatly contributed to industries such as water transportation, fishery and marine development since China joined WTO in 2001.
- 5) The number of new ship orders in China amounted to around 50% of the global new orders in 2014, which was top of the world for five consecutive years.
- 6) Delivery amount of new ships in China ranks the first in the world for five consecutive years, accounting for around 45% of the global in the year 2014.
- 7) In 2013, total new orders of ships undertook by shipbuilding enterprises in China amounted to 69.84 million DWT which increased by 242% YOY. Amount of export orders was 64.74 million DWT, up by 333% YOY. By the end of 2013, amount of holding orders in Chinese shipbuilding enterprises was 131 million DWT, up by 22.5% YOY and the holding export orders amounted to 115.41 million DWT, increased by 30.5% YOY. The completion volume of ships in China was 45.34 million DWT in 2013 which decreased by 24.7% YOY, while that of exported ships was 35.73 million DWT which dropped by 27.9% YOY.
- 8) "Buy and Make Chinese" was the government policy for China industrialization since last three decades [5].
- 9) Over the five years through 2014, the ship building industry in China has been growing at an annualized rate of 2.5% to \$79.4 billion.
- 10) Foreign-owned enterprises generate around 30% of industry revenue. The largest two shipbuilding groups, CSSC and CSIC, produce over 30% of domestic ships in the year of 2014.
- 11) To solve the recent (economic recession and overcapacity) shipbuilding problems, Chinese government issued several documents, order and policy to support the transformation and upgrading of shipbuilding industry in the aspect of old ship elimination and investment in the industry. Policies of Chinese government played an important role in transformation and upgrading of the industry, which brings more orders and time for shipping and shipbuilding market to recover.
- 12) Extra capacity and in time delivery of new building in China consider as strength
- 13) Resource, shipbuilding infrastructure, capability, engine, gen-set, machinery, equipment, deck fitting items, electrical and electronics items, paneling, insulation, furniture, cable and almost all shipbuilding material manufacturer of China are very much favorable for shipbuilding industry in china.
- 14) Forward and backward linkage industries of shipbuilding set in China are vast. 95% Shipbuilding material manufactured inside China.
- 15) Most of the world renowned manufacturer, firm and industries have set up their factory in China and are giving uninterrupted production [2]. That is why shipbuilding material available here and overall cost is less in China.
- 16) Government policy and strategy is friendly and helpful to flourish shipbuilding in China.
- 17) Steady social and political environment is very much helpful to continuous growth of shipbuilding in China [5].
- 18) China possesses the easiest and cheapest transportation cost compare to any countries around the world [7].
- 19) Present China government strategy is to become maritime might in the world and that strategy boast china shipbuilding.
- 20) In 2014, the ship building industry in China has been slowly recovering. Industry revenue is estimated to rise 4.0% from 2013.
- 21) Shipbuilding industry need a large number of skilled workers, along with supporting industries such as railroads, robust track road, steel mills, machinery, fittings, verities of materials, cable, panel, furniture and engine manufacturers. China matches very well with the prime requirement to flourish the shipbuilding.
- 22) A nation's need to manufacture and repair its own navy and vessels that support its primary industries prior to develop it's shipbuilding industry and become maritime power [7]. China is going to become a formidable maritime power in near future leaving behind USA.

23) China has huge expertise in military and civil ships, marine engineering and marine equipment.

24) Few thousands of engineering and technology universities and technical colleges of China provide hundred thousands of shipbuilding and engineering students and diplomas as workforce in the industry in every year [2].

25) China shipbuilding fulfills the requirement of wide geographic diversification, and that is presence in many developing countries [5].

26) Nation has wide diversified into engine manufacturing, ancillary, both commercial and military grade engines, generator, machinery and equipments.

27) China has one of the largest shipbuilding set up in entire globe.

28) China has one the largest R&D facility amongst shipbuilders in the globe [2].

29) In China most of the manufacturers have become highly efficient over the last two decades, with the ability to maximize both the productivity of the workers and machines to maximize profits. It is the positive side for China shipbuilding industry.

30) The strengths of the china shipbuilding industry are relatively stable. However the demand for new building tends to fluctuate with the ups and downs of the economy. But China shipbuilding growth and strengths is sustainable.

31) Uninterrupted and cheap energy and well organized communication is the prime requirement for growth of any industry particularly shipbuilding [7]. China ensures all the requirements.

32) China's shipbuilding industry initially has few obstacles to overcome before it can take full advantage of the opportunities offered. Beijing's goal of sourcing 80 percent of ship components from Chinese industry by 2005 was already met. The actual use of Chinese-made equipment is no more limited due to its improve quality. China has improved a lot in the area of engine, generator, gearbox, pumps, compressor, air conditioning equipments, motors, control system, electrical and electronics equipment and specially propulsion systems.

33) China has also been importing advanced production methods and capital equipment, including complete production lines [2]. Chinese are using foreign sourced computer-aided design and computer-aided manufacturing (CAD/CAM) hardware and software.

34) Chinese naval architects are becoming more proficient in designing ship hulls, compartment layouts, and propeller-rudder combinations that improve speed, efficiency and structural integrity.

35) As Chinese builders have become more competitive in world markets, particularly in dry cargo, container ship,

bulk/ore carrier and crude oil tankers, Japanese and Korean shipbuilders are becoming attracted to the mainland. Japan's Kawasaki Heavy Industries formed a joint venture with COSCO to create the Nantong Ocean Ship Engineering Company (NOSEC), the core enterprise of the newly founded COSCO Shipyard Group. This group has already built the largest ship repair facility in China, and has announced its intentions to become "the No.1 ship repair yard group in the world." They are also doing nice in new building.

36) In 1997, Korea's Samsung Heavy Industries opened its Ningbo Factory in the Quingshi Industrial Zone of Xiaogang, China. Ningbo Factory manufactures and exports hull blocks of ships, steel structures and outfitting to Korean and Japanese shipyards.

37) Joint ventures between the developing Chinese shipbuilding industry and established Japanese and Korean yards helped a lot in transfer technology, engineering skills and production know-how to china. Hundreds of Chinese engineers were being trained by their Japanese and Korean partners. Such transfers were a prerequisite for doing business with any state-owned enterprise in China [2]. Both Japan and South Korean shipbuilders were able to make dramatic improvements in productivity, running as high as 15 percent a year, in their earlier periods of development. With a strong commitment to the industry from China and the inflow of foreign knowledge, now the Chinese shipyards already achieve a standard to satisfy the foreign customers and will improve even more in quality and quantity in near future.

Weakness

1) China's shipbuilding industry has faced considerable pressure/problems due to economic depression in shipping industry in the world.

2) Present global economic recession is reducing overall trade as well as commercial fleet since five years [2].

3) Tougher competition experienced by all shipbuilding nations since last few years.

4) Overcapacity and accelerated mergers and acquisitions of shipbuilding since few years, make the entire industry venerable.

5) Low price of orders and increasing cost of labor and raw material in China also deepen the crisis.

6) Shortage of construction supervision, mid level management and skilled work force observed in China shipbuilding industry.

7) Quality of shipbuilding and machinery work in new building in China need to improve.

8) Design capability for specialized vessel (passenger ferry, LNG carrier, pleasure yachts, warship, etc) need to improve.

9) State owned shipyards and related manufacturers (under CSSC and CSIC) have extra and non productive workforce. Those extra workforce become liability for the industry.

10) Accountability and responsibility of shipbuilding personnel need improvement.

11) Weak performance observed in domestic market in China compared to entire industry in the world [4].

12) Reduction in orders has led to weakening cash flows is a concern.

13) Present shipbuilding industry is quite mature industry. There is heavy competition and little room for growth. As a result, it is no more a cash cow for china as it is already over capacity.

14) Order book of specialized commercial new building (LNG, LPG carrier, VLCC, dill ship, FSPO, FPO, large containership) has inclined to the South Korea. It's a pressure for China.

15) Inefficiency is another pressing problem in shipbuilding industry. Few thousand of China's thousand shipyards are underutilized. A typical Chinese yard employs 9,000-12,000 workers, but these workers are not always kept busy. Poor management, some corruption, lack of technical knowledge and political mandates to use particular suppliers undermine operations. In recent years, Beijing has been trying to reform the industry's structure by merging yards and making administrative changes.

Opportunity

1) Since 2013, bulk orders in Chinese shipbuilding industry encompasses high-tech ships and special ships such as LNG & LPG carrier, VLGC ships, super-large container ships, duplex stainless steel chemical vessels, marine law enforcement vessels, public service vessels and ocean fishing vessels.

2) Shipbuilding enterprises received a large amount of bulk orders and operated in sound condition since 2013.

3) Competition in low-end equipment market is intensive between Singapore and Chinese enterprises. Here China has the advantages over other high tech nation like USA, EC, Japan, Germany and so on.

4) Shipbuilding industry in China has great potential to develop itself in the coming years. On the one hand the cost is lower in Chinese shipbuilding industry than those in Japan and Korea.

5) Increasing domestic demand in shipbuilding industry in China will attract global investment.

6) The momentum in the new-build ordering continued through FY2011 aggregating 31mn GT increasing by 19.2% on yoy basis. New building momentum in 2014 and onward is hope better than recent past.

7) The global economy recovering from the aftermaths of economic crisis grew at 5.1% on y-o-y basis during FY2010 leading to a marginal increase in seaborne trading volumes. This provided an impetus to the new-build ordering volumes during CY10 aggregating 71.1mn GT. Global trade and economy getting some momentum since 2014 onboard.

8) China governments take corrective monetary and non-monetary incentives to boost the industry's prospects [2].

9) In view of the ageing fleet of offshore vessels globally with approximately 40% (of the offshore vessels) above 20 years of age. China is suspected to get those orders in competitive prize in near future.

10) From recent research it has expected that, minimal chances of order cancellations in shipbuilding will be taken place in coming years (2015 and onward).

11) With the growing competition in shipbuilding industry, acquisition and capital operation among large enterprises become more and more frequent. It's in line of China shipbuilding trend.

12) The domestic excellent shipbuilding enterprises pay more attention to the industry market research, especially to the in-depth researches on the industry development environment and product buyers. Because of this, a large number of excellent ship brands rise up rapidly, and gradually become leading corporations in global shipbuilding industry. China is following the same path like Japan and South Korea to achieve its maritime goal.

13) Huge opportunity has created if the industry diversifies largely into military equipment production [4]. China is also moving forward in the same way.

14) Building of the world's largest stainless steel chemical tanker by China shipyard will bring in more orders in coming future [12].

15) Shipbuilding industry is prone to technology and biotechnology areas. Foreign markets with a growing middle class are providing opportunities for technology and biotechnology manufacturers to increase their profitability through exports. This is true for China.

16) Government policy, national maritime strategy and other supportive measure help the local shipyards to survive and flourish in the global market.

17) Business researchers say, China is a home to 1.3 billion people- more than four times the population of the U.S. A, with 11 of the world's 50 largest metro areas and roughly 260 cities with populations of 1 million or more people. China became the world's largest exporter in 2010, and the U.S. was the No. 1 destination for those goods [13]. And China is the third-largest export market for the U.S., as well as the third-largest market overall for luxury goods. So the outlook for international expansion of your business may shine brightest in China.

Threat

- 1) Achieving acceptable quality from the low-technology, low-wage Chinese shipbuilding industry remains a challenge.
- 2) International customers find that a good quality-control inspector is a prerequisite for new building in China.
- 3) Productivity remains short of in compare to Japanese and South Korean yards.
- 4) It is difficult to achieve higher quality standards by Chinese shipyards, as compare with leading Japanese and Korean shipyards.
- 5) It is difficult to break the monopoly of enterprises from developed countries in the field of advanced equipment design and development in a short term.
- 6) Status of Korean enterprises in the field of ocean engineering and equipment construction won't be changed.
- 7) Current problems for Chinese shipbuilding enterprises need to reinforcement by design and development, and the construction capability of high-end equipment [14].
- 8) Shortage of construction supervisors, mid level managers and specialized shipyard personnel.
- 9) Workmanship and shipbuilding quality need more improvement.
- 10) The global economy slowing down in consecutive last few years on account of fiscal imbalances in the developed nations, the seaborne trading volumes deteriorated, adding to the woes of the already over-existent vessel capacity.
- 11) The order book continued to decline aggregating 287.8mn GT as on 2010 owing to the continuous flow of deliveries by the shipyards [15]. The order-book however declined to 269.9mn GT as on June 30, 2011 on account of higher deliveries aggregating 47.7mn GT during 2011. Such declination was continuing in the recent past and will be continue in coming future (suspect in shipbuilding research).
- 12) In 2013, the weak economy around the globe led to decreases in international trade. As such, industry exports declined. In 2013, the output volume of new ships fell 21.5% to 61.5 million tons. Some happen in 2014 and suspect bad days ahead.
- 13) The global yards are expected to be faced with re-scheduling of vessel deliveries in the event of continuation of fragile global economic conditions together with the liquidity crunch from the ship-owners point of view in recent and coming future.
- 14) South Korean shipbuilders eating away their global market share and remain as potential competitor.
- 15) Weakening Chinese currency and its economy could be disastrous.

16) Shipbuilding is knowledge-dependent market segments that require highly specialized workers, which makes it difficult for low wage countries to compete in this market segment, thereby providing an edge to more industrialized countries like China [16].

17) The largest threats for China shipbuilding industry are from low wage shipbuilding countries like India, Philippine, Vietnam, Brazil, so on. Those countries are an even bigger threat to china shipbuilding industry [17], with their ability to supply highly educated workers at low wages to fill roles in both low and high-tech market segment.

18) Diversified R & D in shipbuilding technology with multi-cultural people is absent in China.

19) Continuous development in technological quality and workmanship in USA, EC, Japanese and Korean shipyard has taken placed due to multi-cultural and joint effort [4]. Chinese government has almost negative plan to give living permit to other nationalities in China.

20) USA, Germany and other developed nations achieved solid economic foundation and technological excellence due to multicultural mix and intellectual exchanges. Chinese government policy is unidirectional [18]. As a result, achievement of sustainable economic standard and technological supremacy of china is a challenge.

Conclusion

China is investing heavily in all aspects of the industry, with the purpose of lifting China to become the largest economic and maritime power in the world within 2020. Shipbuilding industry has greatly contributed to industries such as water transportation, fishery and marine development since China joined WTO in 2001. Shipbuilding industry is developing speedily in China. As with other industries, China begins by emphasizing its low labor rates and then moves up the value chain to higher-technology (higher-value) products (i.e., more sophisticated ships). Government policy, national maritime strategy and other supportive measure help the local shipyards to survive and flourish in the global market. Status of the all industry in Chinese economy keeps rising since last three decades. Now China is the largest industrial nation leaving USA behind marginally. As shipbuilding nation China is also number one in the world leaving behind South Korea and Japan. The completion volume of ships in China has been increasing rapidly since the 1990s, making China one of the shipbuilding centers in the world. The number of new ship orders in China amounted to around 40% of the global new orders in 2014, which was top of the world for five consecutive years. Delivery amount of new ships in China ranks the first in the world for five consecutive years, accounting for around 45% of the global in the year 2014. The biggest threats for China shipbuilding industry are from low wage shipbuilding countries like India, Philippine, Vietnam, Brazil, Bangladesh, so on. Those countries are an even bigger threat to china shipbuilding industry, with their ability to supply highly

educated workers at low wages to fill roles in both low and high-tech market segment.

References

1. Stopford M (1988) Maritime economics. Unwin Hyman Press, London.
2. Paul GH (2012) Environmental policy and sustainable development in China. University of Bristol Press, UK.
3. Lixing Z (2009) Development oriented finance and economy in China: A historical review and prognostic assessment. Printed in Bloomington, Indiana, USA.
4. Michael D (2010) China: A modern history, IB Tauris and Co Ltd, London, UK.
5. Jonathan S (2003) China: The race to market; what China's transformation means for business markets and the new world orders. Prentice Hall Press, USA.
6. Churchill GA (2010) Marketing research methodological foundation. (8th edn), Harcourt Brace College Publishers, California, USA.
7. Evan F (2003) China's Techno-warriors. Stanford University Press, California, USA.
8. Frederick MH, Cheryl AW (2004) The Philosophy of Shipbuilding: Conceptual Approaches to the Study of Wooden Ships. Texas A&M University Press, USA.
9. Sawyer LA, Mitchell WH (1985) The Liberty Ships: The History of the "Emergency" Type Cargo Ships Constructed in the United States During the Second World War. (2nd edn), Lloyd's of London Press Ltd., London, England, pp. 7-10.
10. Jaffee C, Walter W (1997) The Lane Victory: The Last Victory Ship in War and Peace. (2nd edn), Glencannon Press, Palo Alto, California, pp. 4-9.
11. Herman A (2012) Freedom's Forge: How American Business Produced Victory in World War II. Random House, New York, USA, pp. 135-6.
12. James B (2009) Korea reigns in shipbuilding, for now. The New York Times. Retrieved.
13. 7 Korean shipbuilders rank in top 10. Marinetaalk.
14. Drouin P (2010) Brittle fracture in ships - a lingering problem. Ships and Offshore Structures 1(3): 229-233.
15. (2014) China will be world's largest economy in 2024: HIS. Retrieved 8.
16. (2013-2017) China shipbuilding industry production & marketing demand and investment forecast report.
17. (2014) Ship building market research report. IBIS World, USA.
18. (2014-2018) Research report on china shipbuilding industry.



This work is licensed under Creative Commons Attribution 4.0 License
DOI: [10.19080/RAPSCI.2018.04.555632](https://doi.org/10.19080/RAPSCI.2018.04.555632)

Your next submission with Juniper Publishers will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats
(Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission
<https://juniperpublishers.com/online-submission.php>