Shipbuilding: A Gateway for Bangladesh to Achieve Economic Solvency

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Abstract

Bangladesh has been ranked 41st among the world's largest economies in 2019 as well as become the second biggest economy in South Asia. As a maritime nation, the country focuses on prospects of Blue Economy and aspires to be a middle-income country by 2021 and developed economy by 2041. To achieve this goal the shipbuilding industry can be the perfect alternative. Being a nation next to the sea, she has a long heritage of building ocean-going ships. With the recent success of the shipbuilders of Bangladesh, it is crystal clear that this industry has more potentials to impact the national economy. The study was mainly a descriptive research. Data were mainly collected from secondary sources. Some primary data were also collected from experts and policymakers through unstructured interviews. The study revealed that Bangladesh has a great potentiality in this sector. Bangladesh is emerging as a shipbuilding nation. In the last decade by exporting more than a hundred ships, Bangladesh earned a lot of foreign currency. The shipbuilding industry of Bangladesh has a great scope in the international market for building small ocean-going vessel although there are some obstacles and challenges that are hindering the proper growth of this industry. The study provided valuable guidance for the government of Bangladesh to make a clear policy regarding the expansion of the shipbuilding industry to attain economic solvency. It is expected that this study would contribute to improving policy, further research and advance the frontier of the knowledge.

Keywords: Shipbuilding, Economic Solvency.

Introduction

Bangladesh has been bearing the flag of a shipbuilding nation from ancient time. The ships built in Chattogram were of high quality and had been preferred by the Turkish

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army, British army and so on. The history of shipbuilding in Bangladesh can be found in the writings of famous travellers like Ibn Battuta and Caesar Frederick. Due to the riverine geography of Bangladesh, a big part of trade and commerce is being conducted through shipping. Consequently, the economy of this country is greatly depended on shipping. Shipping and shipbuilding are inextricably related to each other.

In Bangladesh, the GDP growth used to be made on the basis of three main sectors – agriculture, industry and services. In FY 2017-18, the contribution of the industrial sector is 33.71% and the growth rate of the industrial sector is 11.91%.

Shipbuilding industry is under the industry sector. After RMG, the shipbuilding industry is the second largest sector in the percentage contribution to GDP. From 2008-2012 Bangladesh exported ferries, cargo vessels and ocean-going multipurpose vessels worth more than USD 500 million. (Ethirajan 2012)

The shipbuilding industry has the highest multipliers effect on the national economy, it can earn a huge amount of foreign currency by exporting ships, and it can create job opportunities, provide support to build backward linkage industries and it can help to upheld the GDP of a country.

Global Perspective

In 2018, China consolidated its top position with a 43.1% market share (Morrison, 2019). Chinese shipyards, from being mere shipbuilders in the 1990s, are today the industry leaders. In the last three decades, the Chinese shipbuilding industry has transformed from a 'basic ship producer' to an industry, focusing on 'high technology' and 'support equipment'. This has allowed them to dominate the world market in both commercial and naval shipbuilding segments. 70% of Chinese ships are being exported to 91 countries and regions, including countries like Greece, Norway, US, UK, Japan, South Korea, and Germany (Nitin Agarwala, R.D. Chaudhary, 2019). This enormous growth has been aptly supported by a judicious mix of public and private enterprises in the field of science, technology, and innovation. The Chinese economy is growing day by day and in 2018, they were the largest economy of the world and the Chinese shipbuilding industry has a great contribution to this achievement.

Regional Perspective

Our neighbouring country India initiated a master plan to bring India to the level of China in terms of shipbuilding gross tonnage capacity by the year 2015. About 15 new conglomerates have initiated the development of large scale shipbuilding projects in India with an estimated investment of 60,000 crores rupees, and the coastal state governments from Gujarat to West Bengal are luring the investors, offering lands at throw-away prices and other state incentives (Ahmed, 2008).

The government of India recently formed a consultative committee to determine whether to extend the 30% federal cash subsidy against export which expired recently after five years of continuation. India will have a cost disadvantage of 30-55% compared to China

if the ongoing federal subsidy is removed (Ahmed, 2008). The state government of Gujarat most recently went one step ahead by announcing that it will reimburse stamp duty on land registration for the shipbuilders and it will provide the capital fund with 5% interest subsidy for five years. The Indian government are working hard to flourish its shipbuilding industry and the target is to surpass China in terms of shipbuilding production (Ahmed, 2008).

National Perspective

In recent years, the fast-growing shipbuilding industry in Bangladesh has emerged as a significant means of export diversification. In a short period of time, this high-potential industry has made a good reputation in the global competitive market (Islam, 2018).

Bangladesh's introduction to the shipbuilding market was back in the late 2000s. Initially, a few small boats had exported to Mozambique and a few others to the Maldives, but the major turning point came when Bangladeshi shipyards started receiving orders from Europe. Vessels called multi-purpose cargo ships were ordered by German and Danish buyers. From 2008, upon exporting these ships to Europe, Bangladesh came to be recognised as a shipbuilding nation (Islam, 2018).

Even the government of Bangladesh recognised shipbuilding as a major industry for export diversification. This industry was declared as the "thrust sector" due to its potential in the export business. Presently, Bangladesh is contributing 0.84% of the global shipbuilding market (Ship Building Sector, 2019).

Objective

In the last decade by exporting more than a hundred ships, Bangladesh has emerged as a shipbuilding nation. The shipbuilding industry of Bangladesh has a great scope in the international market for building small ocean-going vessels.

The objective of the study is to discover the potential of the shipbuilding industry in Bangladesh to achieve economic solvency. At the same time, the challenges this industry is facing currently and the opportunities it will have in future if nurtured have also been depicted here.

Methodology

This study is a descriptive and explanatory research. The research is mostly based on secondary sources of information. For the secondary data, literature related to the topic from different databases, websites and other available sources were collected. A systematic review of the collected literature was done in detail.

Primary information has also been collected through unstructured face to face interview and telephonic interview with few shipbuilders, top bankers and some government officials in Dhaka.

Literature Review

(Shemon, 2017) In his work "Problems and Prospects of Bangladesh's Shipping Industry: A Comparative Overview" mostly highlighted on an overall picture of this industry which has been depicted by identifying the actual shipbuilding practice in both public and private sector.

(Zakaria et al, 2010) In his work "Study on some competitive parameters for shipbuilding industry in Bangladesh" mainly focuses on some crucial competitive factors like labour skill, labour availability, labour man-hour, labour cost and productivity for local shipbuilding which are the inherent part for the expansion of this industry. The analysis also focuses on the existing access to the resources like materials, knowledge and capital for shipbuilding. Comparison of these parameters with other nations has been made qualitatively and quantitatively to find the level of our shipbuilding.

(P.G. Patil et al, 2018) In their work "Toward a Blue Economy: A pathway for Bangladesh's sustainable growth", they tried to synthesise the current theory and practice of the Blue Economy concept to govern economic activity linked to the ocean, and to provide a framework for the government of Bangladesh to analyse its potential. Through the report, they offer a conceptual framework to guide policy-makers in Bangladesh in proposing specific reforms, by illustrating the economic activities of the ocean economy together with the underlying natural capital, as well as other types of capital.

The existing literatures analysed the prospects, challenges, the suitability of Bangladesh to develop the shipbuilding industry and the Blue Economy for sustainable growth. But none of these works of literature discussed how this shipbuilding industry can be a gateway for Bangladesh to achieve economic solvency.

An Overview of Shipbuilding Industry in Bangladesh

During the first half of the 19th century, the shipyards at Chattogram used to build ships up to 1000 DWT (Yousuf, 2014). Later, due to the incapability to cope up with the modern shipbuilding technology, Bangladesh had fallen behind. Fortunately, this industry has once again been revived with the initiative of a few businessmen. Yet it is a small step compared to giant shipbuilding economies such as China, Japan and South Korea.

Shipbuilding industry of Bangladesh will continue to grow because the country has several advantages over its rivals. Bangladesh already stepped into the international arena. In recent times, local shipyards can design and fabricate ship up to 3500 DWT to fulfil the demand of the local market. All inland and coastal ships are being built by local shipyards and the number of vessels built per year counts an average of 250. Bangladeshi shipbuilders meet country's internal demand, the value of local shipbuilding is about USD 1 billion per year (Uddin, 2017). Recently, few local shipyards have attained the capacity to manufacture 10,000 DWT ships and shipyards like Ananda Shipyard and Slipways Ltd. (ASSL), Western Marine Shipyard Ltd. (WMSL) and HS has started to export ships from 2008 and day by day the number of exported ships is increasing.

Present (2018) capacity of Bangladesh is 0.84% of global shipbuilding production (Ship Building Sector, 2019). Bangladeshi shipyards concentrate on building medium-sized vessels within 12000 DWT capacity. From 2008-2012 Bangladesh exported ferries, cargo vessels and ocean-going multi-purpose vessels worth more than USD 500 million (Yousuf, 2014). Ships exported to the following countries- Germany, Finland, Pakistan, Denmark, Tanzania, New Zealand, Kenya, India, Uganda, UAE Norway, Ecuador, Gambia, Mozambique, and Maldives.

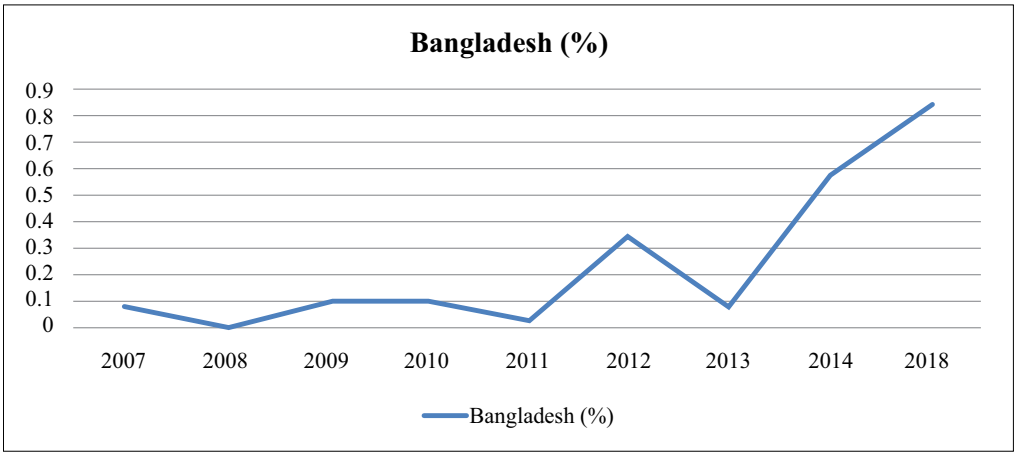


Figure 01- World shipbuilding market shared by Bangladesh
Source: Bangladesh shipyard statistics, 2014 (Compiled by Author).

From the above figure, it is clear that the shipbuilding market is volatile in character and it is same for Bangladesh as well. In spite of the current recession in the world economy, the shipbuilding industry in Bangladesh is booming from 2013. This positive sign indicates the potentiality of this industry.

After garments, the shipbuilding industry is the second largest sector in the percentage contribution to GDP. Contribution of the industrial sector to national GDP is 32.42% and in the fiscal year 2017-18, the growth rate of the industrial sector was 11.99%. Average growth of the shipbuilding industry is 8%.

Export earnings from the thriving shipbuilding industry of Bangladesh have reached a year on year growth of 456.88% in the first half (h1) of the fiscal year 2017-18 (Uddin, 2017). Figure 02 shows that from FY 2012-13 to FY 2016-17, the export earnings from this promising industry had been constantly increasing.

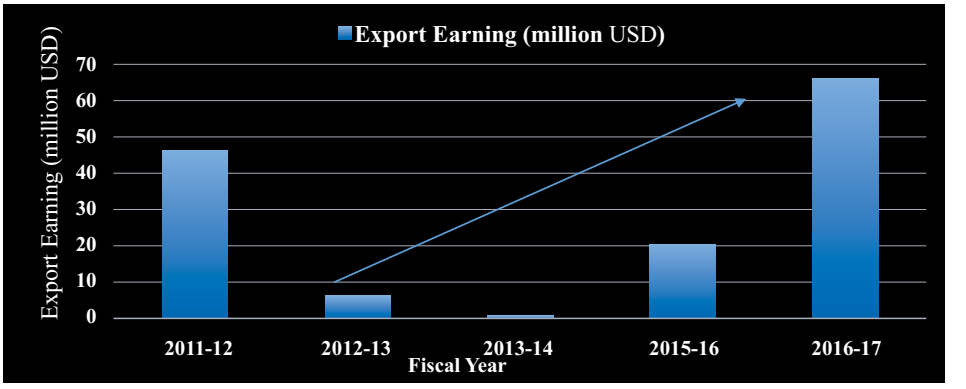


Figure 02- Export earnings of Bangladesh in the shipbuilding industry from the fiscal year 2011-12 to 2016-17(Yusuf, 2014):

Prospects of Bangladesh's Shipbuilding Industry:

Around USD 650.83 billion will be spent on the procurement of new ships in the year 2026 across the globe (Uddin, 2017). There is a demand for small vessels with capacity 3000-15000 DWT (Parvez, 2008). As the leading shipbuilders like China, Japan and South Korea are fully booked for building super-ships and specialised water vessels for the next ten years, Bangladesh is in a strategic position to take advantage of the increasing demand for smaller ships in the international market. Our expertise in domestic shipbuilding has become an advantage for us while positioning us in the international market. Global shipbuilding market size is USD1600 billion. Meanwhile, the market for small ocean-faring vessels would grow to USD 400 billion annually and Bangladesh has a great chance to fetch 1% of shipbuilding market which worth USD 4 billion annually (Ship Building Sector, 2019). In the year 2019 the total GDP of Bangladesh was USD 314.656 billion (IMF, 2019) and with the promising USD 4 billion annual revenue from the shipbuilding industry, the GDP will be enriched which will help to achieve economic solvency.

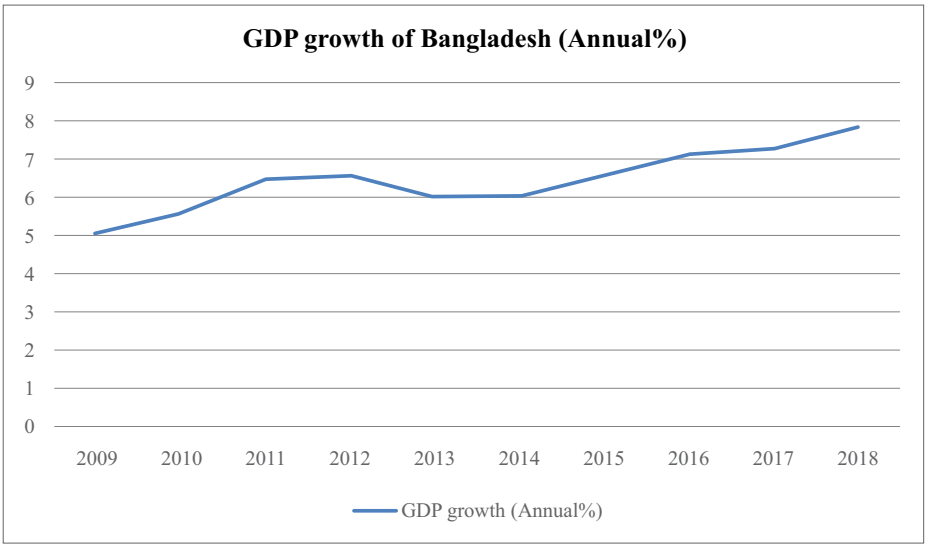
Achieving Economic Solvency through Shipbuilding Industry

Contribution of Shipbuilding Industry to Real GDP

Real GDP is the best single measure of the average standard of living in a country. Gross domestic product is the market value of all finished goods and services produced within a country in a year. And the largest product which has been produced in our country is the ship. The shipbuilding industry is a capital-intensive industry. From 2008-2012 Bangladesh exported ferries, cargo vessels and ocean-going multi-purpose vessels worth more than USD 500 million (Uddin, 2017). Shipbuilding is the second largest sector in the percentage contribution to GDP. During the recession period, the real GDP and GDP per capita falls around the world. But the shipbuilding industry was booming at that time and helped Bangladesh to uphold her GDP (Parvez, 2008).

The economic growth rate of Bangladesh has been depicted by the following table and it is increasing. If we take a close look at the table, it is obvious that from the last decade, the average growth rate reached a level of 6.5% (Source: WDI).

Table 01- GDP growth of Bangladesh from 2009-2018. (Source: WDI).



Nearly 80% of the total GDP comes from the Garments industry. Such a large contribution from a single industry is not the sign of a sustainable economy. In general, the high level of growth rate indicates the potential development of many sectors which have scopes to grow more than the present level. The shipbuilding industry in Bangladesh is one of the sectors where entrepreneurs have shown the feasibility that they can add 1% growth in our economy subject to getting facilities and other services from government and financial sectors (WMSL, 2019).

Economic Multiplier Effects

Shipbuilding has one of the highest economic multiplier effects among all industries, especially in employment and investment which leads to sustainable economic growth. And the technological benefits are outstanding for any developing country like Bangladesh.

Creating Employment Opportunity

Shipbuilding industry is a labour-intensive industry. Small shipyards specialise in vessels below about 10,000 DWT have a workforce of at least 1,000 employees (Stopford, 2009). There are 10,000 of operations going on in a shipyard. There are 124 shipyards around the country and more than 250,000 skilled and semi-skilled workers are employed in the shipbuilding industry of Bangladesh (Shemon, 2017). If we look at the below chart, we can see that the labour cost consists of 47% of the total cost of a merchant ship's building cost. So, it is deducible that the shipbuilding industry will create more jobs and

employment opportunity for the people of Bangladesh through which GDP per capita will increase.

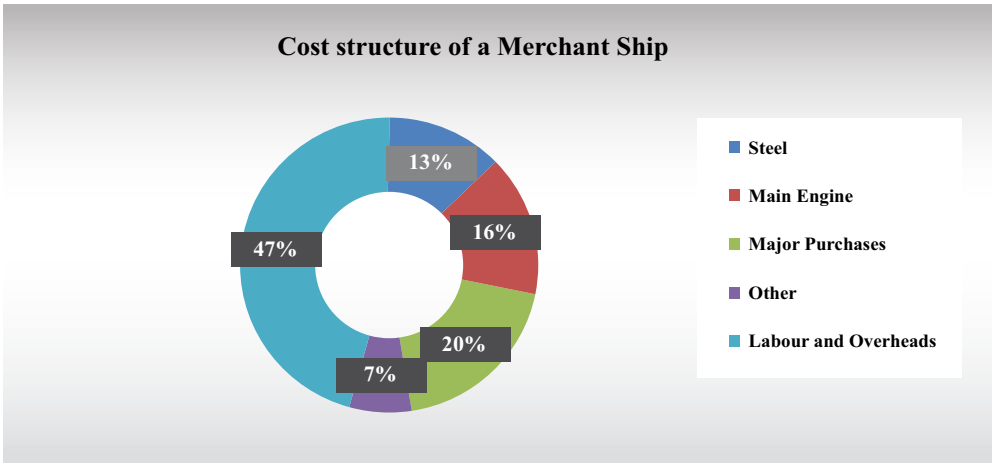


Figure 03- Cost structure of a Merchant Ship (Stopford, 2009)

Development of Backward Linkage Industries

A ship is made out of thousands of individual elements, and shipbuilding will not only create huge employment opportunities but will also help to establish many subsidiary outsourcing/backward linkages. Presently, around 90% of the machinery, parts and other tools are imported for shipbuilding. The good news is few companies have been entered into the supply chain of the shipbuilding industry by producing marine cable (BRB Cable, 2019), marine paint (Roxy Paints, 2019) and furniture.

Enhancing Value Addition

The consequent domestic value addition in shipbuilding for export will eventually rise to 45-50% from the current 25-30% in no time if we can establish the backward linkage industry appropriately (Zakaria, 2019). Local shipbuilders of Bangladesh have suggested setting up of more backward linkage industries to help them add more value to the country's growing shipbuilding sector for increasing its competitiveness in the global market.

Earning Foreign Currency by Exporting Ships

Imagine the take home foreign currency amount per year for the government from just 10 shipyards, each contracted to deliver vessels worth USD 60-80 million to the foreign buyers (Ahmed, 2008). The potential of earning considerable foreign currency aside, the shipbuilding industry, if allowed to develop, will generate unprecedented skill development in the heavy engineering fields whether for a simple technician or an engineer.

Attracting Foreign Direct Investment

The Vietnamese government, in recent years, has pumped millions of dollars into the country's special shipbuilding zone/area infrastructure development plan and arranged 400 million euros as grant from European Economic Community (EEC) in 2004 for an association of about 20 Vietnamese shipyards to transform themselves to international standard by developing modern shipyard infrastructure and by acquiring technical know-how from abroad (Ahmed, 2008). From there on, there was no turning back for Vietnam. The government of Bangladesh, following the example of Vietnam, can be successful in developing its shipbuilding capacity and can even attract foreign direct investments in this sector from Norway and Germany with a package of government-sponsored incentives.

Challenges

Unskilled Labour and Less Productivity

In Bangladesh, actual MH/CGT (which is internationally accepted potential measure of productivity) for steel in a local shipyard for the export-quality ship is six times higher than the international standard of MH/CGT value and for a local vessel, it is 1.5 times higher than international standard (Shemon, 2017).

It is estimated that, the relative productivity of shipbuilding labour of Bangladesh is 11.4 and which is one of lowest among neighbouring countries, which indicates that we have a very cheap labour cost and at the same time it is less productive and unskilled. These two things are posing great challenges in the way to achieve economic solvency.

Weak Financial Back up

The higher cost of investment is the main challenge of this sector. As the shipbuilding industry requires huge capital, Bangladeshi shipbuilders need to have a large capital, and that is a major source of competitive disadvantage for Bangladeshi builders. Bangladeshi shipbuilders can get a loan at an interest rate of 12% whereas their Chinese counterparts can acquire loan at, on an average, 6% interest rate (Uddin, 2017). Bangladesh is lagging behind because of weak financial back up. In addition to this, shipyard owners have to pay import duty on raw materials aimed at ship construction in the country, which is contrary to the industrial policy.

Less Incentive for Export

Export incentives for shipbuilding are very less in Bangladesh. Now the sector gets a 5% incentive on export. Assessing the present market circumstances, the experts from various Bangladeshi Shipyards agreed that the sector will be benefitted, if it is increased to 15%. Our neighbouring country India provides nearly 25% incentives to this sector.

Competitors Around the World

All of Bangladesh’s competitors like India, Indonesia, Philippines and Vietnam mentioned below have cheaper and quicker access to their own steel and other components for

shipbuilding as well as heavy doses of government subsidies and other policy support. Our main competitors India and Vietnam governments are providing interest-free loan for a period of up to 20 years. As a result, Bangladesh is lagging behind in term of production as well as her share in the international shipbuilding market. The following figure shows the shipbuilding productivity of India, Bangladesh and Indonesia in terms of gross tonnage.

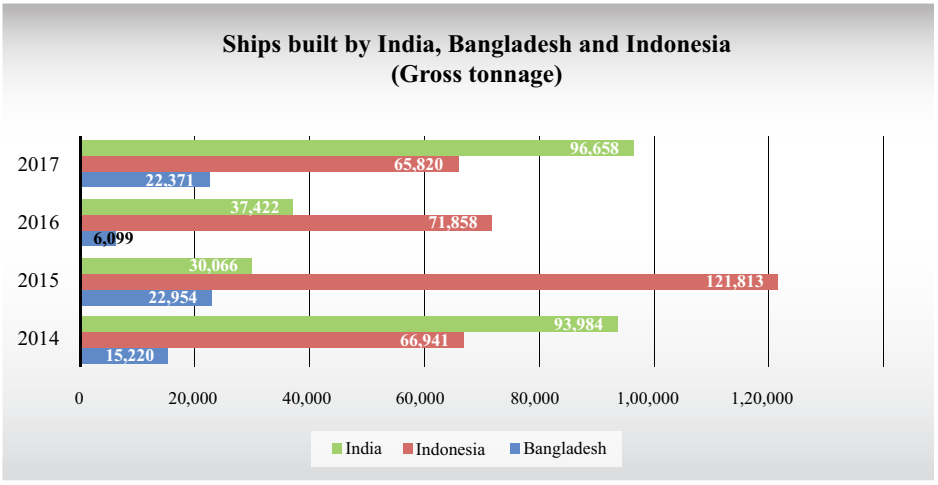


Figure 04: Ships built by India, Bangladesh and Indonesia (Gross tonnage).

Conclusion

In the fiscal year 2019, the GDP of Bangladesh was USD 314 billion. In terms of GDP Bangladesh is now the 43rd largest economy in the world. If we can overtake 23 countries in the next 23 years, we'll have the 20th largest GDP in the world by 2041. The 20th largest GDP means we are a developed nation. Shipbuilding industry can contribute to attaining this achievement. The current shipping boom has provided a unique opportunity for the entry of Bangladesh in the international arena and we can't afford to lose this opportunity. Already Bangladesh has made her maiden journey into the world of international shipbuilding and heavy engineering. The industry is in its infancy, there are considerable bottlenecks to be removed, which need immediate government attention.

Recommendation and Policy Guidelines

The rising labour cost in China, India and Indonesia (main competitors of Bangladesh for smaller ships) will create an opportunity for Bangladesh to remain competitive. The assentation for Bangladesh to remain competitive with cheap labour alone will not sustain unless we develop our technical skill with foreign help or technology transfer backed by fiscal incentives. The following recommendations may help the government to make better policy to develop the shipbuilding industry in Bangladesh.

Transform Unskilled Labour into Skilled and Productive Labour

Bangladesh has the advantage of having very cheap labour but it is less productive compared to the competitors around the world like India, Vietnam, Indonesia, and so on. As this shipbuilding industry is a labour-intensive heavy engineering industry, we need to utilise our human resources more efficiently to improve productivity. An intensive TNA (Training Need Analysis) should be conducted in the shipbuilding industry to identify the specific skills required for the development of manpower. Collaboration among the training institutions and universities is a must. BUET, MIST, BSMRMU and other technical institutions must be informed regarding the skills required in the shipbuilding industry so that they can incorporate those skills into their students who will join the industry. Moreover, special emphasis should be put on the skill requirement of the labours (welders, mechanics, fitters, painters, finishers, etc.). The training institutions must design their courses in such a way so that they can incorporate necessary skills for the labours. Moreover, the shipyards authority needs to change their strategy by setting up a target bar for the workers as well as providing incentives to encourage them.

Long Term Financial Back up

From the signing of a contract to the expiration of guarantee period, total payment procedure of a ship is very lengthy. The following figure can demonstrate the scenario more clearly. For this drawback, the shipbuilding industry needs long-term financial back up with a minimum interest rate to grab more orders from the international market. In this case, most of the bank in Bangladesh reject to provide loan to the shipbuilders as they are not used to wait for the return for such a long period or they agree to give a loan at a very high-interest rate. To solve this, Bangladesh Bank, the central bank of Bangladesh, can directly provide loan to this shipyard owners as it does to various banks with a less interest rate for a convenient time.

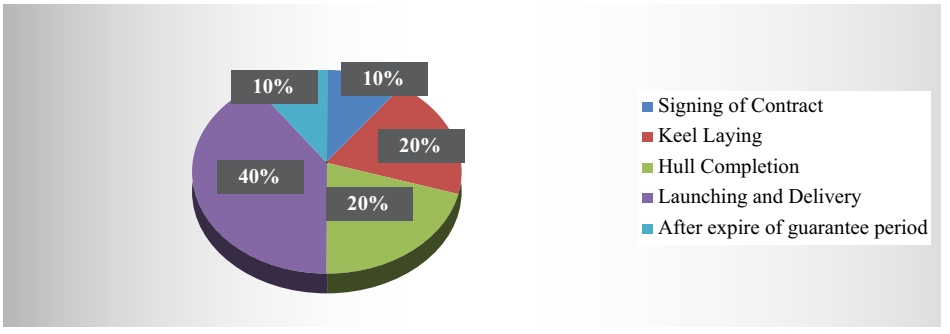


Figure 05: Typical pattern of shipyard stage payments (Stopford, 2009).
Source: Maritime economics Book, Martin Stopford.

Public Private Partnership

The highly prospective shipbuilding industry is projected to earn USD 4 billion by exporting ships within the next five years. The need for building the capacity of the industry

by providing soft loan and a tax rebate for further development must be emphasised. Public Private Partnership (PPP) is proposed for building state-of-the-art dockyards and shipyards to harness Blue Economy and to get a lower rate in bank interest. It facilitates sovereign bank guarantee facility, performance guarantee and creating a fund for the development of the sector.

Single Digit Interest Rate

The shipbuilding industry is a capital-intensive industry. Shipyards require long-term easy loans with single-digit interests for its high social and economic value addition. To become competitive with other shipbuilding nations such as India, Korea, China and Vietnam it is the demand of Bangladeshi shipbuilders to the government to slash the interest rate on bank loan to 6 to 7% from present 13 to 14%.

Incentive in Export

In Bangladesh, currently, the shipbuilding sector is getting a 5% incentive on export. To promote this emerging industry at such primary level, the government may provide at least 15% cash incentive on export to offset various constraints in the sector.

Focus on the Small and Medium Sea-going Vessels

According to our study, a highly lucrative market has emerged for Bangladesh to produce small and medium seagoing vessels as the industry leaders like China and South Korea are after larger container ships and tankers. Bangladesh can emerge as a surprise competitor in the small to medium ocean-going vessels market segment. The overseas buyers have been testing the strength of the country's not-so-organised shipyards with stray orders. It is indeed gratifying that our manufacturers are now planning to go in a big way in this hitherto uncharted territory. Observers believe that this is a sector which has all the potential to flourish. Bangladesh can emerge as a market leader in the small and medium sea-going vessels segment if the backward linkage industry can be made strong.

Promotion of the Shipbuilding Industry

The government can organise shipbuilding exhibition in Bangladesh to introduce the competent, cost-effective and competitive shipbuilding industry of Bangladesh as well as to support the local shipyards in participating international exhibition abroad to secure foreign shipbuilding orders.

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