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**COUNCIL
WORKING PARTY ON SHIPBUILDING**

THE SHIPBUILDING INDUSTRY IN VIETNAM

This report on the shipbuilding industry in Vietnam is submitted for consideration by the WP6 at its meeting on 3-4 July 2008.

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Summary

This report on the shipbuilding industry in Vietnam is one in a series of such reports intended to provide an insight into the shipbuilding sectors of both OECD members and non-OECD economies.

The report has benefited from comments provided by Vinashin (the Vietnamese State Shipbuilding Corporation), whom we thank for their participation. It also remains open for the Vietnamese authorities to provide additional comments, which would be incorporated in a future revision of this report.

Action

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THE SHIPBUILDING INDUSTRY IN VIETNAM

INTRODUCTION

1. Vietnam's recent past is a remarkably successful story of economic growth and transition. From a position 15 years ago as a closed economy, almost completely dominated by the state, Vietnam now has a mixed economy with a dynamic and increasingly competitive private sector. As an example of the opening up of the Vietnamese economy, there are currently an estimated 2 000 state-owned enterprises in Vietnam, whereas 20 years ago there were 12 000.

2. This transition has been achieved through the effective liberalisation of markets as well as economic reforms and new laws regulating Foreign Direct Investment (FDI), and business relations with foreign investors that are strictly enforced by the government. This in turn has led to confidence in the economic system increasing rapidly, as Vietnam has become one of the best performing developing economies in the world. A fast growing economy, political stability, good market potential and a cheap labour force are some of the reasons for the entry of many foreign companies into the Vietnamese market.

3. Shipbuilding is one of the major industries in the Vietnamese Government's economic development strategy¹ and ambitious plans have been adopted to improve the competitiveness of its shipbuilding and maritime transportation industries in the international market. The Government supports the shipbuilding sector in the achievement of the stated ambition of becoming one of the major shipbuilding nations, and has given priority to the development of industrial parks and export processing zones. These are intended to attract enterprises specialising in maritime facilities as well as production of high-grade components and materials.

Snapshot of Vietnamese shipbuilding industry development

4. Shipbuilding is a very attractive industry for developing nations as it can bring in substantial amounts of foreign currency, due to transactions in the market being largely carried out in USD. Japan used shipbuilding in the 1950s and 1960s to rebuild its industrial structure and South Korea made shipbuilding a strategic industry in the 1970s. At present, both Vietnam and China are in the process of repeating these models with large, state-supported investment in this industry.

5. The Socialist Republic of Vietnam has seen an economic boom in the last few years that is similar to that experienced by China. The Vietnamese shipbuilding sector is part of this growth and is developing rapidly by attracting many foreign investors from the EU, Japan and Korea. Investing companies include MAN B&W Diesel, Hyundai Mipo Dockyard, Aalborg Industries, Mitsubishi Heavy Industries.

¹ In 2006, a number of key policy documents, including the Socio Economic Development Plan for 2006-10 were adopted to reform the national economy and open it up to foreign investment.

6. With a coast line of more than 3 200 km, low labour costs and increased potential for domestic waterway transportation, Vietnam has considerable potential to develop its shipbuilding industry. One of Vietnam's principal attractions for foreign shipbuilding companies has been its large, literate² and relatively low cost labour force. Now estimated at 44 million, the labour pool continues to increase by over 1 million workers annually due to the rapid post-war population growth (US Foreign Commercial Service and Department of State 2005).

7. When Vinashin (Vietnam Shipbuilding Industry Corporation - currently Vinashin Business Group) was established in 1996, it had only 23 subsidiaries with poor facilities that could build vessels. Now Vinashin, the national shipbuilding corporation responsible for co-ordinating shipbuilding throughout the country, is developing rapidly, with the goal of consolidating and improving national resources and capabilities in order to construct vessels for export. Vietnam now has around 60 shipbuilding and repairing enterprises, mostly owned by the Ministry of Transportation (through Vinashin), the Ministry of National Defence, and the Ministry of Fisheries (Borgersen 2004).

8. In Vietnam some facilities serve as both new building and repair shipyards, but generally it is a relative new comer to the large ship repair scene. Vietnam has possessed for some time docks able to take ships of up to about 15 000 dwt, but a dramatic uplift in capacity came in 1999 with the opening of new yards by the Hyundai Vinashin Shipyard Company (HVS) - a joint venture with Korea's Hyundai Mipo Dockyard - which are strategically located to cater for vessels that trade between the Far East and Europe.

Geographic distribution of principal construction facilities

9. When Vinashin started its modernisation program in 1996, it had only ten small shipyards, all centred in the northern part of the country around Haiphong. These were all located on rivers and were limited to building vessels of up to 6 500 dwt. In the first phase, Vinashin built up the capacity and quality of its existing yards and in the second phase, which began five years ago, started to build new yards to increase the overall capacity of the group.

10. In Vietnam, the principal construction facilities are located in three clusters; Southern, Central and Northern. Each cluster has some advantages and disadvantages, and these are illustrated in Table 1.

² The Vietnamese Government reports a literacy rate of over 90 percent.

Table 1. Geographical clusters in Vietnam

| Geographic Location | Advantages | Disadvantages |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| South Cluster | <ul style="list-style-type: none"> • Better infrastructure (ports, roads, telecoms) • Major concentration of existing FDI • Largest domestic market for 'higher priced' products | <ul style="list-style-type: none"> • Far from political decision centres • Higher competition from local and foreign companies. |
| Central Cluster | <ul style="list-style-type: none"> • Lowest costs (labour, land etc.) • Easy access to specific inputs (raw material and commodities) • Low competition | <ul style="list-style-type: none"> • Poor infrastructure • Limited FDI • Higher administrative and regulatory uncertainties. • Limited local markets. |
| North Cluster | <ul style="list-style-type: none"> • Proximity to political decision centres. • Most State Owned Enterprises have HQs here • More efficient for special or politically sensitive projects. • Satisfactory infrastructure (including Haiphong port) • Large local market • Easy access to specific inputs (notably minerals) | <ul style="list-style-type: none"> • Stronger bureaucratic hindrances and difficulties related with foreign investment. |

Source: Guidebook for European Investors in Vietnam, Asia Investment Facility.

11. According to Vietnam's existing expansion program, the Northern cluster will focus on containerships and tankers of around 70 000 dwt; the Central cluster on ships between 250 000-300 000 dwt; and the Southern cluster on ships of 30 000 dwt. The main yards in the clusters are listed in Table 2.

Table 2. Major shipyards in Vietnam

| Geographic Location | Name of Shipyard | Province/Municipality ³ | Building/Repair (B / R) |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Southern Cluster | <ul style="list-style-type: none"> • Saigon Shipyard • CK 76 Shipyard • Hoang Anh Shipbuilding Industry • Can Tho Shipyard • Aker Yards Vietnam | <ul style="list-style-type: none"> • Ho Chi Minh City • Ho Chi Minh City • Nam Dinh • Can Tho • Vung Tau • | <ul style="list-style-type: none"> • B/R • B • B • B • B |
| Central Cluster | <ul style="list-style-type: none"> • Dung Quat Shipyard • Hyundai – Vinashin Shipyard • Nha Trang Shipbuilding Industry • Da Nang Shipyard • Song Han Shipyard • Phu Yen Shipyard | <ul style="list-style-type: none"> • Quang Ngai • Khanh Hoa • Khanh Hoa • Da Nang • Da Nang • Phu Yen | <ul style="list-style-type: none"> • B • B/R • B • B/R • B • B |
| Northern Cluster | <ul style="list-style-type: none"> • Ha Long Shipyard • Bach Dang Shipyard • Nam Trieu Shipyard • Song Gia Shipyard • Pha Rung Shipyard • Ngo Quyen Shipbuilding Industry • Nghi Son Shipyard • Ben Thuy Shipyard • Ben Kien Shipyard • Song Cam Shipyard • Song Lo Shipyard • Nam Ha Shipyard • Tam Bac Shipyard • Thanh Hoa Shipyard • Hai Duong Shipyard • Red River Shipbuilding Industry | <ul style="list-style-type: none"> • Haiphong • Thanh Hoa • Ha Tinh • Haiphong • Haiphong • Phu Tho • Nam Dinh • Haiphong • Thanh Hoa • Hai Duong • Hanoi | <ul style="list-style-type: none"> • B • B/R • B • B • B/R • B/R • B/R • B/R • B • B/R • B • B • B • B • B • B/R • B/R |

Source: Compiled by the OECD secretariat.

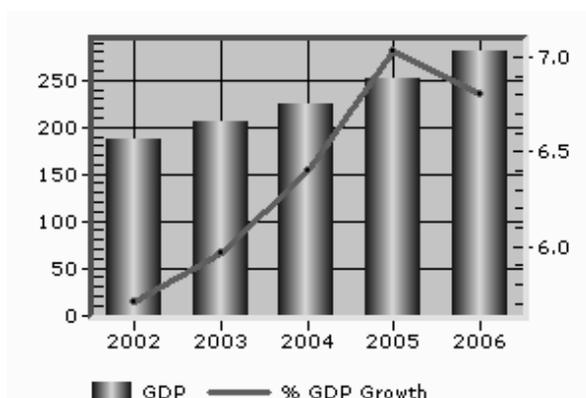
³

Administratively, Vietnam consists of 59 provinces and 5 municipalities. The provinces and municipalities are subdivided into towns, districts and villages. The provinces and municipalities are centrally controlled by the national government, while the towns, districts and villages are locally accountable to some degree through elected people's councils.

ROLE OF SHIPBUILDING IN THE VIETNAMESE ECONOMY

12. In 1986 Vietnam adopted an overall economic renovation policy, popularly called “Doi Moi⁴”, and consequent comprehensive reforms. Vietnam has become one of the fastest growing economies in the world, and pulled itself out of the deep economic crisis of the late 1980’s. Inflation was reduced from three digit numbers in the late 80’s to single digit numbers in the 90’s, and has been kept low ever since. As illustrated in Figure 1, GDP doubled in the 1990s and is continuing to grow rapidly. Exports have also grown at an annual average rate of nearly 20% since 1993, rising from less than USD 1 billion in 1987 to USD 39.6 billion in 2006.

Figure 1. Vietnam GDP PPP (Billion USD) & GDP growth rates 2002 – 2006



Source: EIU economy data.

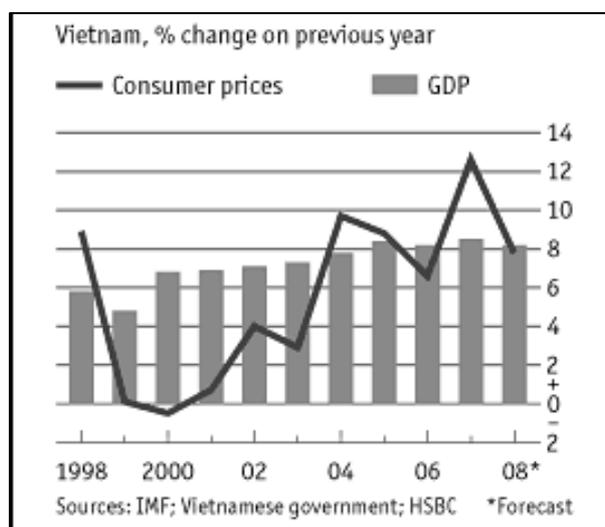
13. Vietnam's economy grew by around 8.5% in 2007, one of the highest rates in Asia, having grown by an average of 7.5% annually in the previous decade (see Figure 2). As it continues to develop rapidly, bank lending is expanding quickly (by 37% in 2007) and there is very strong demand for building materials and equipment, exacerbating the risk of the economy overheating⁵. The World Bank has launched the Global Economic Prospects 2008 (GEP 2008), noting that Vietnam's economy is expected to grow at 8.2% in 2008 and 8.3% in 2009.

14. Foreign direct investment (FDI) has played an important role in Vietnam’s recent economic growth. It has provided capital, technology, know-how and market access, and the growth in industrial output resulting from FDI has exceeded that of the state sector for more than a decade. Neighbouring Asian economies are the dominant source of FDI, with the top five investor economies being Singapore, Chinese Taipei, Japan, South Korea and Hong Kong (China). The domestic private sector growth has also accelerated since the late 1990s, and is now increasing at a consistently higher rate than that of the state sector.

⁴ The Vietnamese Government’s “Doi Moi” policy aims at shifting economic priority from heavy industry to three major economic programmes, namely, encouraging foreign and domestic private investment, reducing state intervention in business, and production of foods & consumer goods.

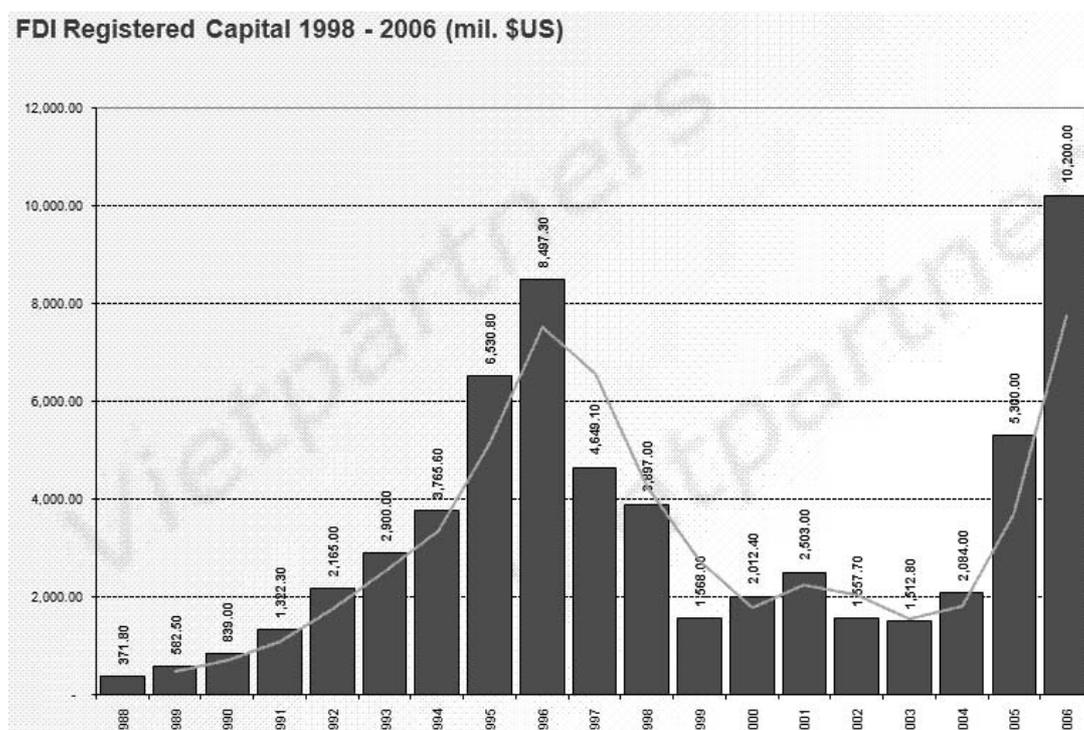
⁵ Information from <http://www.economist.com>.

Figure 2. Vietnam GDP/Consumer prices
1998-2008



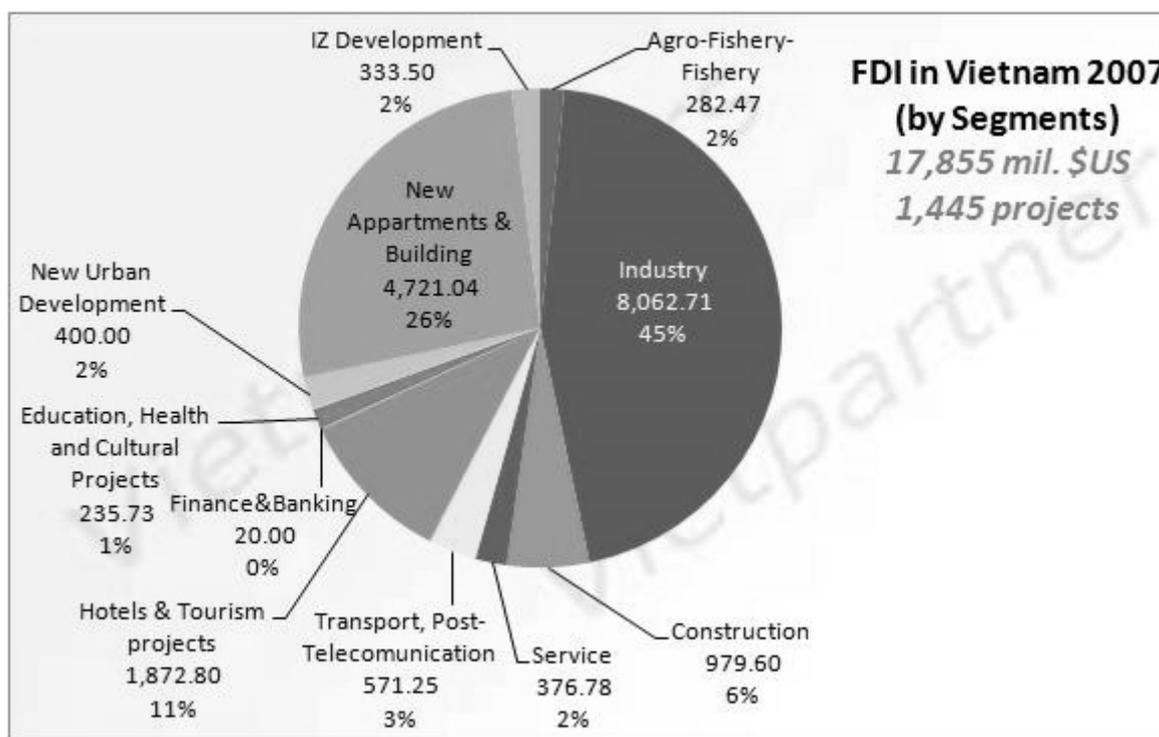
15. From a broader investment perspective, increasing domestic demand, a high level of FDI of around USD 10 billion, and significant domestic investments made a significant contribution to the GDP growth in 2006 as illustrated in Figure 1. The industry and construction sector maintained its important role with a 10.4% growth in 2006, with Vietnam expecting FDI for its heavy industry (which includes shipbuilding) to be around 45% of the USD 17.855 billion total in 2007 as shown in Figure 4.

Figure 3. Vietnam FDI capital 1998-2006



Source: Vietnam FDI Statistics.

Figure 4. Vietnam FDI capital classified by industry – 2007



Source: Vietnam FDI Statistic.

16. Vietnam's accession to the World Trade Organisation as the 150th member economy, which was completed officially in January 2007, is expected to provide an important boost to the economy and ensure the continuation of liberalising reforms. The Economist Intelligence Unit (EIU) expects strong real GDP growth, driven by buoyant consumption and investment. For its part, Vietnam has the ambition of becoming a middle income economy by 2010 and is strongly committed to reaching its Millennium Development Goals in 2012.⁶

Shipbuilding as a strategic industry

17. The shipbuilding industry affects the Vietnam economy in various positive ways, such as supporting the shipping industry, increasing employment, assisting the development of technology in all shipbuilding related industries, stimulating demand for domestic products and increasing foreign currency inflow. The Vietnamese Government has made shipbuilding a key export industry, and in the past five years it has boosted investments within the scope of the Shipbuilding Industry Development Program 2002-2010. Its shipbuilding industry is growing rapidly and creating good opportunities for foreign companies that provide marine equipment and services. The Vietnamese shipbuilding industry first came under the international spotlight in 2004 when Vinashin entered into an agreement with the UK's Graig Group for the construction of 15 DNV-classed 53 000 dwt bulk carriers⁷ (Brewer 2006).

⁶ Information from www.economist.com.

⁷ The USD 322.5 million contract was split into two, with Nam Trieu shipyard (Nasico) in Hai Phong building six ships and sister company Ha Long shipyard in Quang Ninh building the remaining nine.

Relationship with other industries

18. The Vietnamese maritime sector is developing rapidly and Vietnam's stated ambition is to have a shipbuilding industry with a technology level equal to that of other regional economies. The availability and cost of material inputs are significant factors which affect the competitiveness of the shipbuilding industry, and in Vietnam these account for more than 70% of the total costs of building a ship. At present Vietnamese shipyards import the majority of their materials and machinery, due to the inability of domestic production to meet demand, but Vinashin's strategy is to increase the rate of domestically manufactured products to 60-70%, which in turn will create favourable circumstances that could encourage the development of other industries.

19. Vietnam is on the road to becoming an industrialised nation, and the demand for steel is growing due to the emerging industrial sector and the many infrastructure projects in the country. The steel market is one of the important factors that directly affect shipbuilding, as steel represent roughly one-fifth of the total cost of building a typical tanker. In addition, any increase in steel prices will typically force up the price of other materials and equipment.

20. The Vietnamese government approved a blueprint for steel development during the 2007-2025, which requires producers to meet local demand with a surplus for export. Under the blueprint, an estimated USD 10-12 billion will be needed to produce 12-15 million metric tons of steel ingot and 19-22 million metric tons of steel products per year by 2025, with local producers eventually creating surplus production for export. Some additional information on specific plans is covered below.

21. In the last ten years, demand for steel in Vietnam - which has limited domestic facilities and is an importer of steel plate and ingots - has risen by an average of 20% per year, and the current annual demand of 6 million tons is set to rise to approximately 15 million tons by 2015. In 2005, steel imports amounted to 5.5 million tons, equalling almost 90% of consumption. Vietnam had produced 1.33 million tons of steel by the end of July 2007, an increase of 25.4% over the same period in 2006 (SEAICI 2007), and Vietnam intends to reduce its heavy dependence on imports, in particular of warm-rolled and cold-rolled flat products, by securing additional investments in new facilities.

22. The Viet Nam Steel Corporation is aiming to produce 2.35 million tons of steel in 2008. The cheap steel imported from China was one of the biggest challenges that corporation faced in 2007 since China's steel exports have strongly affected the Vietnamese steel market.⁸

23. A contract for setting up a joint venture between Vinashin and Songsan CNI Ltd (Korea) was signed in March 2007, and will start operation in the 2nd quarter of 2008. It is expected to provide a stable annual steel processing capacity of 108,000 tons by 2017 in order to manufacture and assemble steel blocks for shipbuilding projects. The shipyards within the Vinashin Group will enter into contracts with this joint venture for manufacturing high quality steel blocks with the purpose of shortening the shipyard's construction time.

24. POSCO, South Korea's largest steelmaker also has an expansion plan in Vietnam where a project to build a USD 1.13 billion integrated steel mill in the Phu My II industrial zone. This mill, which would be capable of producing around 3 million mt⁹/year of rolled steel, is scheduled to begin operations by late 2009.

⁸ Information from <http://www.vnbusinessnews.com>.

⁹ mt = metric tons.

25. The Lion Group of Malaysia reported that it is considering building a USD 7 billion steel mill in Vietnam. The team is conducting a feasibility study and once completed, a consortium will be formed to manage the steel mill project.

26. India's Essar Group signed a joint-venture contract with the Vietnam Steel Corporation (VSC) and Vietnam's main rubber manufacturer Geruco to build a USD 527 million hot rolled steel mill in southern Ba Ria-Vung Tau Province. Also, India's Tata group has signed a memorandum of understanding to invest USD 3.5 billion in a steel complex in central Ha Tinh province with an output capacity of 4.5 million mt/year.

27. A Vietnamese-Thai joint venture involving the domestic Hoa Sen Joint Stock Company plans to construct a USD 60 million steel mill, and a USD 30 million steel-building materials factory, in Phu My II industrial zone.

28. The market has also witnessed strong competition among local producers. The Thép Viet Joint Stock Company has invested USD 100 million in a steel ingot plant in Phu My Industrial Zone with a capacity of 500 000 mt/year. The plant is understood to be currently undergoing trial runs and is expected to be officially put into operation by late 2007. The company also plans to build a USD 1.5 billion rolled steel plant with a capacity of 3 million mt/year by 2015.

29. Vinashin, the Vietnamese multi-sector corporation, aims to establish a steel integrated mill, scheduled to open in 2008, with a capacity of 4.5 million tons per year in Ninh Phuoc district. In the first stage, between 2008-2010, Vinashin will develop the project at an estimated cost of USD 2.7 billion. The remaining capital will be transferred into expanding the mill over the next 8 years.

30. To further reinforce the Vietnamese desire to achieve domestic self-sufficiency in steel production, the import of steel scrap doubled in 2007, as supply for steel ingot production is falling short of growing demand. According to the Vietnam Steel Association, the Vietnamese steel industry imported 700 000-800 000 tonnes of steel scrap in 2006, 1.4 million tonnes in 2007 and an estimated 2 million tonnes in 2008.

31. With respect to the needs of the shipbuilding industry, the Vietnamese state-owned shipbuilding group Vinashin owns high capacity steel rolling facilities, and will be able to produce most of the heavy plate and special steel products that it requires to meet its future demands¹⁰, so it may not be dramatically affected by the heavy demand placed on steel production by other industry sectors.

VIETNAMESE GOVERNMENT POLICIES

Role of government

32. The Government of Vietnam has accorded a high importance to shipbuilding, and has been supporting the sector within the scope of its sector support programme. This programme provides considerable support to the sector (BLP 2005) including:

- Providing Vinashin with loans on advantageous terms.

¹⁰ Vinashin is constructing a new hot-rolling mill with an initial annual capacity of 350 000 tons in the Quang Ninh province near the port of Cai Lan in northern Vietnam.

- Allowing the corporation to retain total corporate income tax and capital-use tax¹¹ for the period 2002 to 2010 for reinvestment.
- Exemption on export taxes and land rent.
- Government covers up to 50% of working capital available to State Owned Enterprises (SOE).
- The State Development Fund provides loans with 12 months payback and 2 year's grace period for the infrastructure costs of new shipyard projects.
- Restriction of second-hand ship imports.¹²

33. Furthermore, the Vietnam Shipbuilding Industry Strategic Development Programme 2001-2015 has mapped out the following general objectives of a development programme which include three implementation phases (Vinashin Business Group 2006):

Period 2001-2005

- Upgrade shipyard capacities for building dry cargo ships up to Handymax size.
- Technical preparations for construction of more complicated vessels such as Aframax tankers and Ro-Pax in phase 2.

Period 2006-2010

- Further upgrade and modernize shipyard technology to a level equal to mid-class shipbuilding economies.
- Domestic production of shipbuilding material and equipment such as steel plates, marine engines (2 and 4 strokes), hatch cover and cranes up to 70% of a ship value.

Period 2010-2015

- Manage modern shipbuilding technology for offshore structures and for vessels up to 150,000 dwt (VLCCs).
- Attain a solid position in Ro-Pax market.

Financing and guarantee schemes

34. The Investment and Development Bank of Vietnam (BIDV) is mainly responsible for the guarantee of repayment of loans, as well refund guarantees on advance capital in the shipbuilding sector. However, it also cooperates with other banks such as the Vietnam Foreign Trade Bank (VCB), the Vietnam Industrial Commercial Bank (Vietincombank), the Agriculture and Rural Development Bank (Agribank) and the Saigon Joint-Stock Commercial Bank to cover large amounts.

35. More specifically, the Vietnam Shipbuilding Finance Company has been working closely with the Vinashin Group and its subsidiaries to find financing solutions similar to the cooperative relationships established between Vinashin, the Vietnam Development Assistance Fund and various banks (ABS 2007).

¹¹ In Vietnam, profitable State enterprises are expected to provide a return to the State through the payment of a tax called the "capital-use tax".

¹² Vietnam is currently protecting its domestic shipbuilding with a 10-15% import tariff on fishing and small cargo ships and 5-7.5 % import tariff on cargo ships over 5,000 dwt.

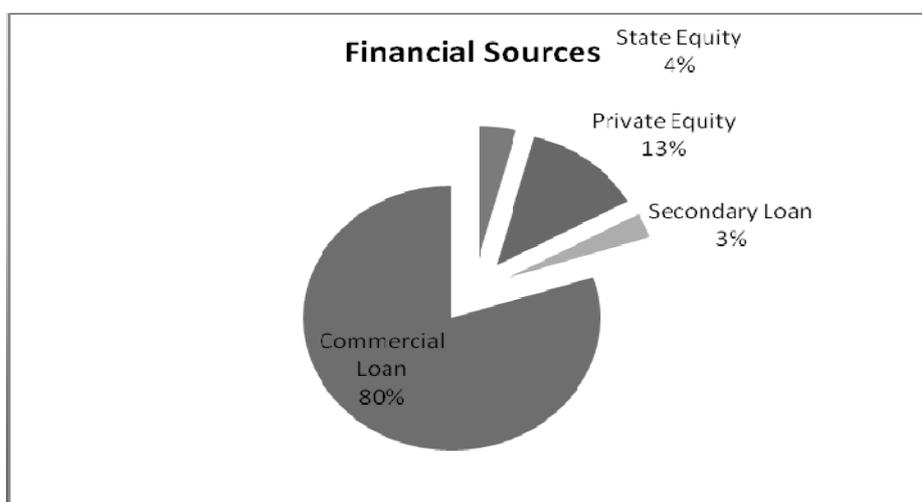
36. In 2004, the Vietnam Maritime Commercial Joint Stock Bank and the Vietnam Investment and Development Bank (BIDV) jointly signed a credit agreement with Ha Long Shipyard for VND 100 billion (USD 6.36 million) to build a number of 12 500 dwt vessels. This and other agreements¹³ have brought new, sustainable and long-term viability to Vietnam's shipbuilding sector.

37. In 2005, Vietnam issued its first global bond raising valued at USD 750 million, with the entire amount loaned to Vinashin to fund its expansion. Since then, to reduce borrowing costs, many Vietnamese companies - including Vinashin - have switched from bank loans to bond issues in order to reduce interest charges from 12-15% to around 10%. Most recently, Vinashin issued its third 10-year corporate bond valued at VND 3 trillion (USD 187.5 million), of which around 95% was sold to offshore investors.

38. State-owned Vietnam National Shipping Lines (Vinalines) is planning a USD 309 million bond issue at the end of 2008 to buy four Aframax tankers from Vinashin and is working with Credit Suisse on debt ratings before deciding on the timing of its first international bond issue. Moreover, the USD 130 million loan that it recently signed with Citigroup will be used to buy five cargoships. Vinalines is undertaking a major expansion programme with Vinashin, and signed contracts with the yard for the eventual production of 64 vessels at a total cost of USD 2.5 billion.

39. Today, Vinashin has an orderbook of around 14.4 million dwt,¹⁴ of which roughly 70% comes from overseas, and this has forced Vinashin to invest heavily in its shipbuilding facilities in order to meet this strong demand for large vessels. To finance this expansion, in 2006 Vinashin raised investment capital totalling VND 15 trillion (USD 937.5 million), an increase of between 35-45% over the previous year. Vinashin also has a target of raising the ranking of Vietnam's shipbuilding industry to fourth in the world by 2015, and to achieve this will requires an estimated capital expenditure of USD 5.14 billion by 2011, as illustrated in Figure 5 (Vinashin Business Group 2006).

Figure 5. Source of US\$ 5.14 billion capital



Source: Vinashin Business Group 2006.

¹³ For example, the state-run Development Assistance Fund (DAF) signed an agreement with Vinashin in 2004 to provide VND 1,200 billion (USD 76.43 million) to construct five 53,000 dwt bulkers for export to the UK. This was backed by a preferential loan accounting for 65 percent of the total value of vessels with a 24 month payback period.

¹⁴ Information from Vietnam Shipbuilding Industry Corporation as of May 2008

40. This USD 5.14 billion capital for 2008-2011 period would be allocated as follows:

- Shipbuilding/repair (USD 1.4 billion)
- Shipping (USD 2.05 billion)
- Heavy industries (USD 1.13 billion)
- Construction (USD 0.37 billion)
- Trading & others (USD 0.15 billion)

R&D and innovation

41. The Shipbuilding Science and Technology Institute (SSTI) was established in 1959 in Hanoi, and is Vinashin's largest subsidiary company focusing on R&D. At its height it employed about 500 engineers, but in the intervening period this had shrunk to as low as 50. With the formation of Vinashin in 1996, and a national commitment to commercial shipbuilding, SSTI acquired a new mission at the front line of the country's developing shipbuilding industry, and began to grow again. Its staff built knowledge and experience by training abroad in Japan and Korea, and engaging in joint ventures with foreign design offices. The Institute maintains a Ship Research and Test Center which includes a model ship testing basin, and has a close relationship with foreign design institutes such as Hitachi Zosen (Korea), Carl Bro (Denmark), Kitada Ship Design Co. (Japan) and CTO (Poland).

42. Today SSTI employs 250 naval architects and marine engineers and focuses mostly on providing design and engineering services. In 2007, SSTI took a role in the country's highest profile shipbuilding project by commencing the design of the first Aframax tankers (115 000 DWT), in cooperation with American Bureau of Shipping (ABS). These are currently under construction in the Dung Quat yard. SSTI's next design projects are expected to be for a 3 200 teu container feeder vessel and an MR (medium range) product tanker.

43. The institute has designed a range of vessels, including cargo ships, tankers, floating docks, barges, small passenger and tug boats. Vinashin is planning to upgrade the SSTI and its model testing basin in order to allow for the design of vessels up to 100 000 DWT. The Dung Quat Shipbuilding Corporation and the Oil and Gas Shipping Investment Joint Stock Company signed a contract in 2006 to construct 54,000-DWT freighters that were designed by the SSTI.

44. In 2005, SSTI began working with Poland's Ship Design and Research Center to co-operatively design and build containerships and crude oil carriers, as well as the development of a new testing basin for models. That basin is now under construction in Hoa Lac High-Tech Park, and is scheduled to be ready for operation by the end of 2008. Polish experts have trained SSTI engineers in the operation of the basin and supplied the institute with new equipment, including a cavitation tunnel and a wave maker (ABS 2007).

45. SSTI's immediate goal is to entirely produce its own designs of vessels of up to 170 000 to 200 000 dwt by 2010. Its future plans include expansion into education, with a training school and maritime technical academy specialising in shipbuilding and naval architecture. The institution's expected student throughput is around 1 500 per year, and the academic network will extend to a number of branches throughout the country. Construction of facilities has already begun at one site.

46. The design for offshore development is among the SSTI's long term goals, and it has a branch office for future offshore projects in Vung Tau, the area south of Ho Chi Minh City, that is becoming the country's oil and gas services centre.

47. The Vietnam Maritime University (VIMARU) has developed rapidly¹⁵ over the past years and also set up the Research Center of Ship Technology Application. This centre focuses on shipbuilding, ship repairs, marine equipment as well as wharf designs.

INDUSTRY STRUCTURE

Analysis of the structure of the Vietnamese shipbuilding industry

48. In Vietnam, the Ministry of Transport (MOT) is responsible for all transport modes such as maritime, road, railway, air and inland water transport. Its responsibilities in the maritime sector include ship building and related services, as well as ports and regulatory matters. Vinashin is the country's principal shipbuilding company, and reports directly to the Prime Minister, as well as to the MOT on state administrative matters (ASEAN 2005). Vinashin was founded in 1996 as one of the largest state owned enterprises of Vietnam, and was itself based on the Vietnam Shipbuilding Union, established in 1972 (Vinashin Business Group 2006). The key elements of Vinashin's structure are as follow:

- Vinashin is a holding company with over 200 subsidiaries including
 - around 28 shipyards;
 - Vinashinlines including 5 shipping companies (Vinashin Ocean Shipping Lines, Bien Dong Shipping Company Vinashin Coastal Lines, Vinashin Oil & Gas Shipping Lines, Mekong Shipping Company);
 - 9 engineering & construction companies;
 - 12 joint venture companies including Hyundai-Vinashin Shipyard, Visco, Vinashin Sejin Marine Accommodation Co., Baikal Shipping, Shell Gas, Vietnam-Korea Ship Demolition Co., Vietnam-Canada Ship Repair Corporation;
 - 20 manufacturing companies;
- Headquartered in Hanoi with about 300 employees.
- It has also established representative offices in Germany, Holland, Poland, Russia, Australia, Korea, Iraq and the US in order to enter the international market.

49. Vinashin established a vessel owning subsidiary named Vinashinlines. Alongside Vinalines, the traditional national shipowners, this created two umbrella organisations for maritime transport in Vietnam. The main purpose of forming Vinashinlines was to give Vietnam's shipyards a client and a venue for demonstrating their abilities to construct world-class vessels, and initially to give the world maritime community a sense of security about ordering from shipbuilders that did not have an international track record. Vinashinlines entered the business with several small tankers importing oil products to Vietnam and a series of multipurpose dry cargo ships in the 12 000 to 15 000 dwt range. Today, through its five subsidiary firms, Vinashinlines owns a fleet of nine bulk carriers, two tankers and two containerships with a total capacity of about 350 000 dwt. By 2010 the company expects to raise its fleet of 44 vessels with total to 1.5 million dwt (ABS 2007).

¹⁵ Information from www.vesamo.org

Ownership structure, joint ventures, foreign participation

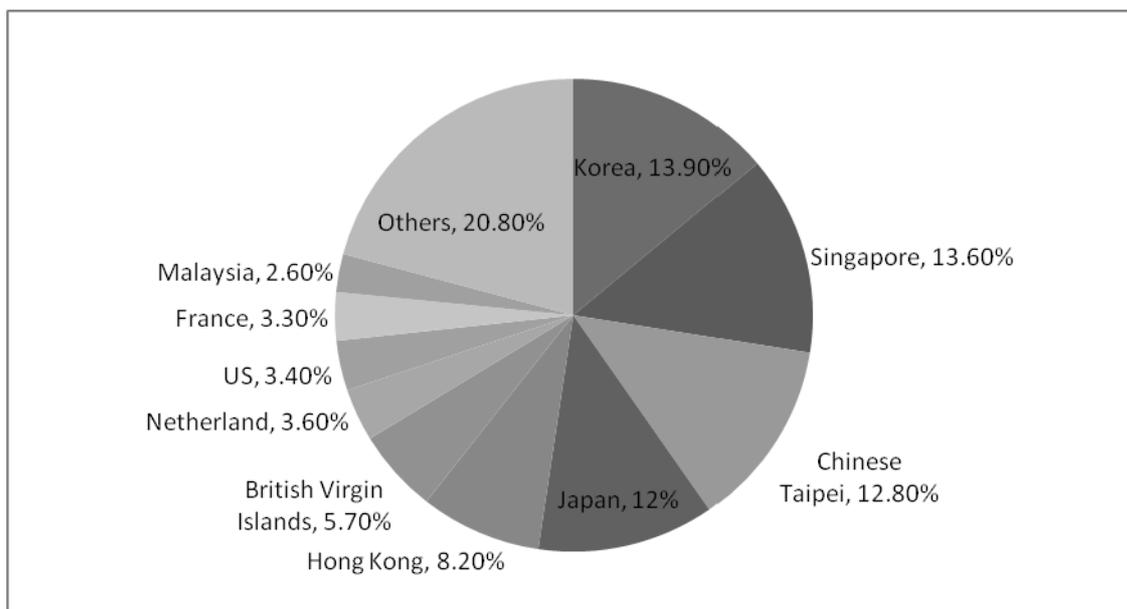
50. The current healthy state of the global shipbuilding market, which has resulted in virtually full orderbooks for most of the major international shipyards, has pushed ship owners towards new destinations in the search for new suppliers. Vietnam is promoting its shipbuilding industry through the state owned group Vinashin, which owns around 70% of the shipbuilding capacity, and whose shipyards are mostly situated near big ports such as Hai Phong and Ho Chi Minh City.

51. Most of the large shipyards in Vietnam are under the management of Vinashin, which operates on the parent-subsidary model. Therefore, foreign companies enter into the Vietnamese shipbuilding sector mainly by setting up joint ventures that result in the creation of new entities or by acquiring the shares of local shipyards.

52. From an industry-wide perspective the mechanisms used by foreign participants when investing in Vietnamese enterprises are: Full (100%) foreign ownership (85.7% of total projects), Joint Ventures (10.6%), Business Co-operation Contracts (1.1%) and Joint Stock (2.6%). Over the past two decades (and as of June 2007), the top 10 investor economies in Vietnam (see figure 6) were (Huan 2007):

- South Korea (USD 9 365 million)
- Chinese Taipei (USD 8 621 million)
- Hong Kong (USD 5 505 million)
- Netherland (USD 2 429 million)
- France (USD 2 249 million)
- Singapore (USD 9 191 million)
- Japan (USD 8 067 million)
- British Virgin Islands (USD 3 819 million)
- USA (USD 2 319 million)
- Malaysia (USD 1 740 million)

Figure 6. The 10 largest foreign investors in Vietnam as of June 2007



Source: Vietnam Foreign Investment Agency, 2007

53. On the other hand, Vinashin has a number of strategic partners that are not investors, where those partners work together in a variety of way to improve the quality of ships and the meeting of delivery dates. These strategic partnerships also aim to increase efficiency in terms of reducing cost levels and improving capacity usage, in order to cope with both increasing domestic and foreign new shipbuilding orders.

54. For example, Poland has played an active part in the development of the shipbuilding industry in Vietnam, and Vinashin has imported equipment worth more than USD 50 million from Polish companies, as part of a USD 70 million credit agreement between Poland and Vietnam (AMEM 2005). The Dutch Government has also implemented soft credit programmes to promote trade and investment cooperation with Vietnam for its marine equipment sector.

Special Economic Zones in Vietnam

55. Many foreign investors have commented that in Vietnam it is faster and more convenient to implement projects in the Industrial Zones than outside those zones, as there the land use is already planned and they need not be involved in site clearance, compensation works and the construction of necessary infrastructure, all of which are time consuming and sometimes difficult (US Department of State 2007). Shipbuilding companies in Vietnam may choose to construct vessels in two different types of Special Zones:

- Economic zones (EZs) have been developed as designated areas targeting foreign investors willing to locate their production base in Vietnam while exporting 100% of their production. Subject to specific provisions, shipbuilding companies operating in EZs can take advantage of exemptions from customs duties for equipment, raw materials, commodities imported into the zones and for finished goods and products exported from the zones.
- Industrial zones (IZ) have been developed to accommodate both foreign and local companies, targeting both domestic and export markets, with the idea of providing better infrastructure and easier routes for procedural approvals. Considering that the fiscal incentives initially reserved for EZs have now been extended to those companies located in IZs that export at least 80% of their production, the IZs¹⁶ are by far the most common form of ‘special zone’ in Vietnam.

56. Vinashin has invested in the establishment of shipbuilding industrial zones and encouraged local industries, as well as foreign investors, to participate. More detail is given in Tables 3 and 4.

¹⁶ From the establishment of its first EZ in 1991 until now, Vietnam has established a total of 137 IZs and EZs. As of November 2006, there were 2 320 foreign investment enterprises licensed in the zones, with a total registered capital of USD 19 billion.

Table 3. Economic zones in Vietnam that include shipbuilding facilities

| | |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nhon Hoi economic zone shipbuilding project | <ul style="list-style-type: none"> • Vinashin is planning to construct and repair 10,000 dwt vessels in the first phase, and 100 000 dwt vessels after the second phase in Nhon Hoi economic zone. • This project is a part of the Vietnamese shipbuilding development program. |
| Dung Quat economic zone shipbuilding project | <ul style="list-style-type: none"> • This economic zone is located in the central province of Quang Ngai. One of the major projects in this zone is Dung Quat shipbuilding complex estimated to cost over USD 700 million. |
| Van Phong economic zone shipbuilding project | <ul style="list-style-type: none"> • In this economic zone, STX Shipbuilding Ltd of South Korea, is expected to build a shipyard with an annual capacity of between 900 000 and 2.5 million dwt covering 300 hectares. |
| Nghi Son economic zone shipbuilding project | <ul style="list-style-type: none"> • This economic zone is located in the north-central region in Thanh Hoa province. Its establishment is expected to enhance the development of this north-central region of Vietnam, and will include a shipyard capable of building 50 000 dwt vessels. It will also contain high-end steel and construction materials industries. |
| Thinh Long Industrial Zone | <ul style="list-style-type: none"> • Vinashin is also ready to spend some USD 40 million to build Thinh Long Shipyard in Thinh Long Industrial Zone. The new shipyard will be able to construct and repair vessels of 15 000 – 30 000 dwt. |

Source: Compiled by the OECD secretariat.

Table 4. Shipbuilding related industrial parks in Vietnam

| | |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Xoai Rap shipbuilding industrial park (IP) | <ul style="list-style-type: none"> • This new IP is located in Tien Giang province with an area of 485 hectares. The Tien Giang provincial People's Committee has already allocated 246 hectares of land to the Vinashin for investment projects in the first phase. • In 2007, Vinashin plans to construct a shipbuilding plant in the Xoai Rap IP employing more than 10 000 workers. Also, the Wonil Group of Korea was registered to rent 100-200 hectares of land in the IP to produce equipment and machinery for the shipbuilding industry. The Korean group plans to invest USD 300 million for a shipbuilding plant, and will recruit 5 000 workers. |
| Soai Rap industrial park | <ul style="list-style-type: none"> • This IP is located in Tien Giang province and has plans for a shipbuilding complex with sub-contractors and a special purpose port. |
| An Hong industrial park | <ul style="list-style-type: none"> • This IP is located in Haiphong and has plans for marine engine assembly up to 6,000 HP, production of anchors, electrical equipment, accommodation equipment, boilers, navigation equipment, and containers. |
| Lai Vu industrial park | <ul style="list-style-type: none"> • This IP is located in Hai Duong province (220 ha) and has plans for a 300 000 TEU capacity container factory, outfitting manufacturing, heavy industries, 2-stroke engine factory and technical training centre. |
| Cai Lan industrial park | <ul style="list-style-type: none"> • This IP is located in Quang Ninh province (56.4 ha) and has plans for a steel plate mill of 500 000 tons/year, 40 MW power plant, steel structure factory and port terminal. |

Source: Danish export association 2006

Workforce (including training and education)

57. Vietnam has a population of around 83 million, of which the majority (around 75%) live in rural areas and is under the age of thirty. The workforce totals about 59 million, of which between 10% and 45% are unemployed or underemployed. The average income is around USD 500 per year. It is estimated that 1-1.5 million new people join the workforce each year (NORAD 2003). Strong industrial growth and expanding foreign investment is generating a demand for a variety of work skills that are currently in short supply. Creating a better-trained workforce will be a key pillar to Vietnam sustaining long-term economic growth and developing an internationally competitive workforce. To this end, over the last few years the Vietnamese Government has increased budget allocations, liberalised private sector involvement and has encouraged foreign participation to develop education and training services in Vietnam.

58. The Government has developed a long-term Education Development Strategy for 2001 to 2010, and estimates that education expenditure could increase to 6.9% of GDP and 20% of total government expenditure by 2010 (US Commercial Service 2005). Vietnam has also increased enrolments in education; primary enrolments are very nearly universal and secondary enrolments have risen to over 65%. The potential for future growth in agriculture is limited, therefore creating employment in sectors like shipbuilding, that are outside of agriculture and the traditional informal segments, is a core challenge for the Government.

59. As an example, in 2000, the Nam Trieu shipyard in the northern Vietnamese port of Haiphong was a small shipbuilder with 321 workers and construction capability of small vessels of up to 13,000 dwt. Today it is a multi-sector corporation with a total of 12,000 employees (ABS 2007). By 2012, total group employment is expected to reach 35,000.

60. At present, the abundant low-cost labour force is a clear strength for the shipbuilding industry in Vietnam, where labour costs are very competitive compared to international levels, as the monthly salary for an average worker is about VND 950,000 (about USD 60). In comparison, the average cost of skilled labour in Korea is 15-20 times higher, and 2-3 times higher in China (BLP 2005). When allowances, social security, overtime and other costs are figured in, the average cost per worker to the employer is between USD 90 and USD 110 a month in Vietnam, whereas in the Dongguan region of southern China it is in the USD 160 to USD190 range¹⁷.

61. The changes in the size and structure of the shipbuilding industry, and the introduction of new technologies and products, necessitate an enhancement of the normal levels of recruitment and related training requirements for all categories of personnel. In Vietnam, the training and education of the shipyard workforce engaged in production, management and design activities requires special attention because skill levels are generally low, due to the cost of training and the large number of workers rapidly inducted into the shipbuilding workforce in order to cope with increasing demand. Even though Vietnam has an ample and youthful workforce, only 27% of workers have received vocational training, and skilled labour shortages hinder Vietnam's industrial capacity.

62. Despite its attractions, labour in Vietnam poses some problems for foreign investors. There is a shortage of managerial talent and skilled workers, resulting in higher salaries and very high turnover of those with skills, as those employees seek out ever more lucrative opportunities. Another factor raising the

¹⁷ This difference of \$70 to \$80 per worker per month would make Vietnam significantly more attractive than China if labour costs were the only factor. However, China is currently ahead of Vietnam in the level of its domestic suppliers and other supporting industries.

cost of skilled and managerial workers is Vietnam's progressive personal income tax system that results in labour costs being two to three times higher than in other Asian countries for relatively high-paid local staff. This difficulty was addressed by a legislative amendment in 2004.¹⁸

63. FDI enterprises organise short-term vocational training courses, or re-train their workers on-site, to meet their immediate requirements. Sometimes FDI enterprises have to retrain around 30% of their workers, and even send workers who work at key stages of the production lines abroad for training.¹⁹ Vietnamese labour does not consider FDI enterprises only as a source of higher wages, but also as a mean of acquiring new knowledge and skills, and to learn new working techniques.

64. From a domestic perspective, the staff building programs of Nam Trieu Shipbuilding Industry Company (Nasico) include training of its staff at foreign shipyards in Europe and Japan, as well as special courses on international regulations and procedures for quality control inspectors (ABS 2007).

65. More generally, due to the high demand for workers in the industry sector and to improve rural income, the Tien Giang province has been working with Ho Chi Minh City to organise job training courses to encourage farmers to shift from agriculture to industrial production. In addition, the Ben Tre province is seeking to open 60 private vocational training schools, and encourage 1 000 companies to take part in job training, in order to supply at least 70 percent of the workforce for the province through 2010.²⁰

Specialisation into particular vessel types

66. Vietnam aims to develop the capability to build various kinds of ships through technology transfer and joint ventures. Its newbuilding orderbook has substantially increased recently with new orders of Aframax, VLCC tankers, FSO vessels and LPG carriers, and Vietnam is also aiming to build a solid platform in the Ro-Pax market. Joint ventures provide a quick, inexpensive way to close the gap between Vietnam and the established market, both in terms of technology and structure. Vietnam still needs a certain amount of time to establish its reputation quality, which is very important if it is to bid for sophisticated vessels, because this sector has high expectations with respect to the technological sophistications and high quality of the end products.

67. An example of Vietnam's advances in this market has been the 54 000 dwt Handymax sisters Graiglas and Florence, which were handed over simultaneously by the Nam Trieu and Ha Long shipyards, in the northern part of Vietnam, which are series-building the Diamond 53 class to diversified export accounts. Construction is now also in progress of the first vessel from Vietnam to top 100 000 dwt, which will provide a new reference point for the industry.

68. Vinashin's Dung Quat Shipyard is to deliver three 105 000 dwt Aframax tankers in 2010, the first of which is being built to the account of Vinashin's own shipowning interests. The second and third tankers have been contracted by PetroVietnam, which is also set to steer the industry into the very large crude carrier field, having signed letters of intent for two 300 000 dwt-plus tankers, with further options.

69. Another initiative which is giving added dimension to Vietnam's production and technical capability is the long-term strategic agreement entered into with Höegh Autoliners in the field of deep sea pure car carriers. The first output of this co-operation will be state-of-the-art vessels of 6900 car

¹⁸ Under this legislation, the tax burden on Vietnamese employees was reduced, effective 1 July 2004. Key changes included the broadening of tax brackets and removal of the top marginal income tax rate of 50%.

¹⁹ Information from <http://english.vietnamnet.vn/reports/2007/03/672767/>.

²⁰ Information from <http://english.vietnamnet.vn/biz/2006/12/640466/>.

equivalent unit capacity. External input into this cooperative arrangement is likely to be considerable since the agreement provides for technology transfers and includes the participation of the classification society Det Norske Veritas, as well as the Finnish technical marine and ship design consultancy Deltamarin. Vinashin's breakthrough in the car carrier market was highlighted by a contract in 2006 with Ray Car Carriers, entailing eight vessels each with a capacity 4 900 units.

70. Aker Yards is also to enter into a joint venture with the Singapore company Amanda Group to create a new shipyard at Vung Tau that will specialise in offshore support vessels. Aker will own 70% of the new undertaking and intends to invest USD 16 million into the development over a period of three years. The yard is ultimately expected to have an output capacity of three or four newbuilds a year. The first project involves a series of six anchor-handlers, incorporating the Aker AH08 design and contracted through Aker Capital, for the Asian offshore market.

71. Under a joint venture agreement between Damen Shipyards of the Netherlands and Vinashin, a new yard is to be created in the Haiphong area to target more specialised tonnage in the under-10 000 dwt range. Damen Vinashin Shipyard will apply the Dutch partners' particular expertise in fields such as tugs, offshore vessels and workboats, high-speed craft and small cargo ships (Lloyd's List 2007).

Access to, and development of, technology

72. A competitive shipbuilding industry cannot simply depend on low labour cost, as this is an unsophisticated and often fleeting competitive advantage. Experience around the world has shown that yards also need to adopt new technologies in order to improve productivity and retain their competitive edge. Vietnam appears to have recognised this, and the transfer of technology in order to improve efficiency, technical capability and productivity is one of the more common cooperative arrangements between Vietnamese shipyards and foreign partners. In particular, the Vietnamese government promotes co-operation with foreign partners such as Poland, Germany, Norway and Japan in order to encourage knowledge transfer on ship design and new technologies.

73. At present, the local content (labour, secondary materials and some minor equipment) in the shipbuilding sector is just 30-35%, while engines and other main items of equipment are imported. Vinashin hopes to increase the local content ratio by building a factory to assemble diesel engines of up to 32 000 hp in Hai Phong, and to establish new plants to manufacture welding rods and other items for vessels. The company will also set up two shipbuilding centres in Saigon and CanTho to assemble diesel engines, gear box anchor linkage, boilers.

74. Vinashin has signed contracts with Polish shipbuilders for the transfer of modern shipbuilding technologies worth around USD 200 million (Borgersen, 2004) and also plans to invest between USD 1.5 billion and USD 2 billion for the construction of high-speed vessels with a capacity of 2 000 passengers for the north-south route of country; with the first vessel being constructed by a foreign shipyard, while others would be built in Vietnam.

75. The Vietnam Chamber of Commerce and Industry (VCCI) has close cooperation with Vietnamese and Dutch maritime enterprises in marine equipment areas such as in fire-proof and water-resistant materials for cables, pipes, propellers, and freezing equipment for the shipbuilding industry.

Role of marine institutions

76. The Vietnam Register (VR) is a non-profit State Body that provides technical supervision and certification related to the application of Quality and Safety standards to most major transportation modes, including ships and offshore installations. It was established in 1964 and issued its first Rules and Regulations for Classification and Construction of Steel Sea-Going Ships in 1970. It is headquartered in

Hanoi and maintains 26 offices and sub-offices nationwide that provide ship and offshore classification and certification services. VR has signed bilateral classification agreements with all 10 members and the associate member of the International Association of Classification Societies (IACS) and with prominent non-IACS societies. These agreements authorise foreign class surveyors to perform surveys on behalf of VR outside Vietnam and for VR to perform work on their behalf inside Vietnam.

77. VR began its first work with vessels above 15 000 dwt in 2005, when it undertook the classification of a series of 20 000 dwt bulk carriers designed in Vietnam. Today, VR is engaged in surveying the new construction of a series of 53 000 dwt bulk carriers and 104 000 dwt oil tankers as well as the construction of a 150 000 dwt floating storage and offloading (FSO) unit.

78. The American Bureau of Shipping (ABS) recently signed an expanded agreement of cooperation with VR covering the provision of a wide range of classification and statutory services²¹. The VR's main area of focus was on smaller ships and some offshore installations, but the changing nature of Vietnam's shipbuilding industry means that VR must now expand its horizons and capabilities. Bureau Veritas (BV) has also signed an agreement with VR covering training and development of VR surveyors, who will work through BV's structured training programme and work on secondment with BV.

79. Det Norske Veritas (DNV) is one of the most important classification societies for Vietnam's expanding shipbuilding industry, accounting for approximately 70% of the country's orderbook, and with VR has jointly developed a 3 year training program for all Vinashin shipyard staff. With the support of Norad (Norwegian Agency for Development Cooperation) more than 1 200 people each year will be trained in different aspects of shipbuilding.²²

80. As a result of significant support from Germanischer Lloyd (GL), Vietnamese employees were trained directly at the Peene yard design office in Wolgast, Germany. Furthermore, MPC²³ Marine has sent permanent staff members to the Nasico yard in Haiphong to train local workers (GL 2008).

Role of minor yards and off-shore structures, ship conversion capability

81. Vinashin has capabilities in the repair, conversion and modification of all double hull ship sizes up to VLCC. Its services include floating and dock repair, oil rig repair and car carrier elongation. Repairs are largely carried out at Bach Dang, Pha Rung, Hyundai-Vinashin (HSV) and Saigon Shipyards (Vinashin Business Group 2006).

82. The Ministry of Transport operates some small shipyards (capable of building vessels up to 800 dwt) which service inland river transport needs. There are also small yards operated by the Ministry of Fisheries which mainly build wooden fishing boats. Furthermore, the Peoples' Committees of some coastal cities and provinces possess some small shipyards, which mainly serve the domestic market for small ships.

Role of the marine equipment industry

83. Today, shipyards are flexible enterprises which are tied together in value added chains with external suppliers - such as their service partners and marine suppliers/equipment manufacturers. Formerly

²¹ This agreement is expected to open the way for ABS assistance to help VR meet the challenge of constructing large and specialised vessels.

²² Information from www.marinelog.com.

²³ MPC Marine is a company of the Hamburg based MPC group. Its worldwide activities focus on the development of newbuilding projects with shipyards.

integrated shipyards, which covered the whole production process of a ship, are no longer the standard model. On average 1/3 of the added value of a ship is produced by the shipyard itself, while 2/3 are produced by other suppliers.

84. Therefore Vinashin has licence and co-production agreements for marine equipment with a number of manufacturers²⁴, and is also planning to construct new facilities that will focus on manufacturing auxiliary equipment. These agreements help Vietnam to modernise its shipbuilding industry, raise the local participation rate and considerably trim costs compared to imported equipment and machinery. They also create conditions for Vietnamese shipbuilding workforce to approach and apply the modern technology and to produce equipment suitable for export markets.

85. The Vietnamese domestic mechanical industry represents 13% of its industrial output, most of it for domestic use. Engines below 30 HP are manufactured entirely in Vietnam as well as some pumps and air conditioners.

86. The Hai Duong industrial park (where the cost of all infrastructure and buildings is carried by Vinashin) has a marine equipment factory with an area of 9 800 m² and can produce marine engines, generators, steering gear & propeller shaft system, cranes and windlasses, valves, pumps and fans. Equipment suppliers can first start by assembling components, and then manufacture the products for both the domestic and export markets.

87. Vinashin Control System and Communication (Vinacom) is a subsidiary of Vinashin that has the capability of manufacturing marine equipment such as automation technology monitoring and control system, shipboard cables, GMDSS equipment and air conditioning & safety emergency systems; although some of these depend on foreign partnerships.

88. Nam Trieu Shipbuilding Industry Company (Nasico) has invested in a number of projects aimed at diversifying auxiliary sectors associated with the shipbuilding industry. One of the group's most successful enterprises is the Nam Trieu Welding Materials Company (Nawelco), a manufacturer of welding electrodes and solid and flux-core welding wire. Nasico's objective is to increase the use of domestically produced marine equipment and materials, such as hatch covers, marine and hoisting equipment and steel wire. Nasico also operates a hot rolled steel plant that produces steel plate for the construction of new vessels. In the future Nasico is planning to shorten the shipbuilding cycle, increase its technological capability, raise product quality and update the preparation and organization of production.

89. Some marine equipment companies that are active in Vietnam are:

- Denmark's MAN B&W Diesel A/S, supplier of large diesel engines for ship propulsion systems, stationary power supply and rail traction, signed a contract on transferring ship manufacturing and assembling technology with the Bach Dang shipyard of Vinashin for the main engines up to 32 000 HP.
- Mitsubishi Heavy Industries, Ltd. (MHI) signed an agreement in 2005 for the licensing of its low-speed diesel engine technology to Vinashin. The contract applies specifically to the Mitsubishi UEC-LA, LS, LSII and LSE engines, and the licensing agreement also encompasses marketing and servicing of these engines in Vietnam. The period of licensing is from 2005 to 2014.²⁵

²⁴ Vietnam annually imports mechanical equipment valued at around USD 7 billion from Germany, Japan, China and South Korea.

²⁵ Information from www.vinashin.com.vn

- Vinashin and Wartsila Switzerland Ltd, a subsidiary of Wartsila Corporation, jointly signed a licence agreement for the manufacture and sale of low-speed marine diesel engines in Vietnam. The agreement grants Vinashin the right to manufacture certain types of modern low-speed engine types at their works in Vietnam. The first delivery of a Wartsila engine is scheduled for the year of 2010, with production building up to a targeted annual output of 30 to 40 engines per year. This licence agreement provides the growing Vietnamese shipbuilding industry with the latest technology for low-speed diesel engines, including the most modern electronically controlled common-rail technology. Prior to this licence agreement, Wärtsilä low-speed engines had already been ordered by Vinashin for import from Japan and Poland.
- The German firm Thyssen-Krupp AG established a representative office in Vietnam in 1995, and since then the Group has been actively operating in steel, elevator technologies and services and supplying equipment to the shipbuilding industry, as well as an insulation and corrosion protection materials to the oil and gas industry.
- A joint venture to manufacture maritime equipment will be set up in the northern city of Hai Phong under a contract signed in March 2007 between Vinashin and Finland's Macgregor Group. The new joint venture has been licensed to begin operating in the Vinashin-Shinec industrial zone in the northern port city of Haiphong and will concentrate on hatch cover production to service shipyards within Vietnam. The next phase will include the production and assembly of ship cranes as well as the production of RoRo equipment.
- A joint-venture established in 2005 between Danish Aalborg Industries and Vinashin is manufacturing high quality marine boilers for Vietnamese shipyards, as well as other shipyards in Asia. Aalborg Industries also supplies waste heat recovery boilers, thermal fluid heaters, burners, heat exchangers and inert gas systems.

PRINCIPAL CONSTRUCTION FACILITIES

Construction/production capabilities

90. The Vietnamese Government aims to have new shipbuilding capacity of 3 million dwt by 2010, and expansion works have been going on in many shipyards. The following Tables 5, 6 and 7 show the construction capabilities and activities of the main yards.

Table 5. New building and repair activities in main south cluster shipyards

| Name of shipyard | Construction/Production capabilities |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Saigon shipyard | <ul style="list-style-type: none"> • While in the past the company could only build boats, catamarans and sailing yachts with a capacity around 1 000 dwt for inland transportation, it is now capable of building 6 500 dwt vessels. • The yard is to build 10 general cargo ships ordered by Midland Shipping of Canada, each of 5 190 dwt, for delivery by 2009. These are intended for river and sea operations • Vinashin is planning to upgrade this shipyard for newbuilding and repairing vessels up to 22 500 dwt. |
| Hoang Anh shipbuilding industry company | <ul style="list-style-type: none"> • This yard was developed from a small shipyard and the company and became a member of Vinashin in May 2003. It has the ability to build up to 10 vessels of 2,500-3,000 dwt a year. |
| Aker yards – Vietnam | <ul style="list-style-type: none"> • This new yard will deliver its first AHTS (Anchor Handling Tug Supply) vessel in 2010 and currently has 6 x 4 000 dwt AHTS in its orderbook. |

Source: Compiled by the OECD secretariat.

Table 6. New building and repair activities in main center cluster shipyards

| Name of shipyard | Construction/Production capabilities |
|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dung Quat shipyard | <ul style="list-style-type: none"> • Vinashin is the sole investor and will eventually be one of the largest shipyards in South East Asia and located in Dung Quat economic zone. The yard is constructed to build vessels up to VLCC in docks of 520 m x 110 m and 380 m x 86 m with a 3 000 m. of quayside. It will also be the builder of Petrovietnam's two new 104 000 dwt Aframax and VLCC tankers. |
| Hyundai-Vinashin shipyard | <ul style="list-style-type: none"> • This yard is a joint venture between Vinashin (with 30% ownership) and the Korean Hyundai Mipo Dockyard. It was originally built as a repair yard for vessels up to 400,000 dwt but has been upgraded and is now also capable of offshore structures. |
| Nha Trang shipbuilding industry company (Nha Trang SICO) | <ul style="list-style-type: none"> • This yard is to build 12 cargo freighters of 20 000-36 000 dwt and three 250-TEU container carriers with a total value of USD 462 million for Vinashin Petroleum Investment, Transport Joint Stock Company, Vinashin Ocean Shipping Company and Southern Industrial Development Company. All these four companies are the members of Vinashin Business Group and the first ship will be handed over by 2009 and the order to be completed by 2011. |
| Danang shipyard | <ul style="list-style-type: none"> • This yard is capable of constructing cargo freighters of 20 000 dwt and repairing ships of 30 000 dwt, and is also equipped with advanced shipbuilding technologies. It has an initial investment capital of around USD 38 million. |
| Phu Yen shipyard | <ul style="list-style-type: none"> • This shipyard is currently building eight barges of 200 dwt for a domestic company and four fishing vessels of 600 hp each for ASEAN clients. Upon completion of the second phase it will be able to construct fishing vessels of 1 000 hp and cargo ships of 3 000 dwt. |

Source: Compiled by the OECD secretariat.

Table 7. New building and repair activities in main north cluster shipyards

| Name of shipyard | Construction/Production capabilities |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ha Long shipyard | <ul style="list-style-type: none"> This yard is one of those selected to build 8 of the 53 000 dwt bulk carriers for Graig Investment. It is also the builder of 1 700 TEU and 3 200 TEU container vessels for Vinalines and a series of 12 000 dwt freighters for Vietnamese customers. This was founded in 1976 with assistance from Poland, with which it maintains an historical connection, and it mainly uses Polish equipment. Expansion plans at the shipyard are already underway with a new slipway and dry dock under construction, with plans to increase its workforce from 3 000 to 5 000 over the next three years. |
| Bach Dang shipyard | <ul style="list-style-type: none"> This shipyard is capable of building about eight ships at the same time of around 20 000 dwt each. In 2006, it built a 13 500 dwt oil tanker, and two handysize dry cargo vessels for Japan. It also delivered a 610 TEU container ship to the Bien Dong Transport Company. Bach Dang yard has begun manufacturing Mitsubishi marine engines in the 8 400 to 32 000 hp range. |
| Nam Trieu shipbuilding industry company | <ul style="list-style-type: none"> This yard has been tasked by Vinashin to build 7 of the 53 000 dwt vessels for the Graig as well as general cargo vessels for Vinalines. Nam Trieu company will build eight 6 900 units car carriers for Hoegh Autoliner (Norway). <p>Also, Vinashin started construction on the country's biggest 150 000 dwt floating storage offloading (FSO) vessel that will be a key component in the development of Vietnam's offshore oil reserves for PetroVietnam in this yard. The FSO is scheduled for construction on a specially outfitted slipway over 18 months.</p> |
| Pha Rung ship repair yard | <ul style="list-style-type: none"> In 2003-4, an important landmark was seen in the development of Pha Rung Ship Repair Factory (Pha Rung Shipbuilding Company today), when the factory began to build vessels instead of just repairing them. Vinashin has allowed Pha Rung Ship Repair Yard to upgrade and expand its factory for the repair of 16,000 dwt vessels and construction of 35 000- 40 000 DWT vessels. The Pha Rung yard will construct some bulk carrier vessels of 34 000 dwt for Graig Investments of the UK and a chemical tankers of 6 500 dwt and 13 000 dwt. |
| Song Gia shipyard | <ul style="list-style-type: none"> Pha Rung Shipbuilding Company has started to the construction of the most advanced shipyard in Vietnam to date, costing nearly USD 312.5 million. To be completed by late 2007, Song Gia shipyard will be capable of building 26 oceangoing ships a year, with capacities ranging between 50 000 dwt and 70 000 dwt. |
| Nghi Son shipyard | <ul style="list-style-type: none"> In its current configuration this yard is able to build and repair oceangoing ships of over 50 000 dwt. In the second phase (2010) the Nghi Son Shipyard will be upgraded through the expenditure of USD 57 million to double its capacity to 100 000 dwt. |
| Ben Kien shipyard | <ul style="list-style-type: none"> This yard delivered 8 700 dwt cargo ships to the Japanese Kanematsu Corporation and is building ten 4 600 dwt MPP vessels for Denmark's Clipper Group and 14 000 dwt cement vessels for Norwegian shipowner. |

Source: Compiled by the OECD secretariat.

INDUSTRY PERFORMANCE

Types of vessels built and production record

91. The main vessel types in the portfolio of Vietnamese yards are as shown below:

- Bulk carrier vessel (handysize/handymax)
- Crude oil tanker (afamax/vlcc)
- Container vessel (up to 1 016 TEU)
- General cargo vessel (up to 12 500 dwt)
- LPG vessel (up to 7 200 cbm/6 500 dwt)
- Chemical/Oil products tanker (up to 13 000 dwt)
- Multi purpose (MPP) container vessels (up to 15 000 dwt)
- Pure Car Carrier (PCC) vessel (up to 6 900 unit/27 000 dwt)
- Floating storage and offloading (FSO) vessel (up to 150 000 dwt)
- Anchor handling tug supply (AHTS) vessel (up to 4 000 dwt)
- Others:
 - Dredgers (max. 1 500 m³/h)
 - Passenger boats (about 100 seats)
 - Fishing boats (max. 600 cv)
 - High-speed boats (max. 30 miles/h)
 - Tugboats, barges, yachts, rescue ships/boats

92. The world output of new vessels in 2007 was 34.7 m cgt,²⁶ of which Vietnam delivered 0.76m cgt. This is 0.68 m cgt more than its 2006 output (see Table 8) (LR 2007).

Table 8. The total completions of Vietnamese yards – cgt (million)

| Year | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| cgt (million) | 0.02 | 0.04 | 0.04 | 0.07 | 0.08 | 0.76 |
| World share (%) | 0.10 | 0.18 | 0.16 | 0.27 | 0.26 | 2.19 |

Source: Clarkson research services / Lloyd's Register Fairplay (December 2007).

93. In general, Vietnamese yards produce smaller tonnage vessels such as tankers, bulkers and multipurpose (MPP) vessels. However, Vietnam's newbuilding orderbook increased recently with new orders of Aframax and VLCC tankers, as shown in Table 9.

94. The expansion of Vietnam's shipbuilding is similar to that of China and South Korea, in that the growth has been heavily dependent upon the export market, whereas in earlier times the UK and Japan based their initial expansion programmes upon the domestic fleet. Around 60% of Vinashin's production is destined for export, with Graig Investment Ltd. (UK), Ray Shipping (Israel), Clipper (Denmark), NOMA Shipping Lines (Japan), Kanematsu (Japan), Fortune Marine (S.Korea) and Damen Shipyard (Holland) its key customers (Vinashin Business Group 2006).

²⁶ cgt is Compensated Gross Tons, a measure, developed by a group of major shipbuilder associations in conjunction with the OECD that provides a common yardstick to reflect the relative output of merchant shipbuilding activity in large aggregate. It is widely used by the shipbuilding industry.

Table 9. Domestic/export mix of Vietnamese yards orderbook

| Type of vessel | Export vessels no. | Export cgt | Domestic vessels no. | Domestic cgt |
|-------------------------------|--------------------|------------------|----------------------|----------------|
| Bulk carriers | 54 | 793 234 | 7 | 103 334 |
| Crude oil tankers | - | - | 5 | 129 797 |
| Container vessels | 10 | 78 504 | 3 | 42 567 |
| General cargo vessels | 51 | 271 864 | 36 | 153 975 |
| Vehicles carriers | 12 | 346 296 | - | - |
| Chemical/Oil products tankers | 9 | 84 470 | 3 | 43 475 |
| LPG vessels | 4 | 29 596 | - | - |
| Total | 140 | 1 603 964 | 54 | 473 148 |

Source: Lloyd's Register Fairplay (December 2007).

Analysis of order books

95. The world newbuilding orderbook grew to 488.5 million dwt (Table 10) as of the beginning of 2008; a significant increase on earlier years. Table 10 also shows the types of vessels in that orderbook.

Table 10. World newbuilding orderbook (1998 /January 2008 - million DWT)

| ORDER BOOK Mill. dwt | | | | | | |
|-------------------------|---------|-------------------|---------------|-------------------|--------|-------|
| Start | Tankers | Chemical carriers | Bulk carriers | Combined carriers | Others | Total |
| 1998 | 30.4 | 11.3 | 26.4 | 0.4 | 14.5 | 83.0 |
| 1999 | 34.3 | 11.1 | 25.5 | 0.4 | 13.7 | 85.0 |
| 2000 | 24.8 | 10.4 | 30.5 | - | 15.5 | 81.2 |
| 2001 | 39.3 | 9.5 | 34.3 | 0.2 | 24.5 | 107.8 |
| 2002 | 52.0 | 10.0 | 22.4 | 0.2 | 27.9 | 112.5 |
| 2003 | 45.3 | 10.8 | 30.3 | 0.2 | 22.9 | 109.5 |
| 2004 | 65.1 | 10.2 | 48.4 | - | 41.2 | 164.8 |
| 2005 | 72.0 | 11.6 | 60.6 | - | 56.2 | 200.4 |
| 2006 | 76.5 | 3.3 | 61.4 | - | 68.1 | 209.3 |
| 2007 | 128.7 | 11.0 | 78.9 | - | 80.0 | 298.6 |
| 2008 | 147.7 | 19.0 | 216.1 | - | 105.7 | 488.5 |

Source: Platou research 2008.

96. In terms of Compensated Gross Tonnes (cgt)²⁷ - see Table 11 - South Korea held the largest orderbook with 63.4 million cgt, (35.7% of the world total), followed by China with 50.2 million cgt (28.2%) and Japan with 30.7 million cgt (17.3 %). Vietnam has recently begun to make its presence felt in international shipbuilding, with its growth based on the availability of very cheap labour. Its emergence started gradually in July 1999, with contracts averaging just 0.02 million cgt a year until 2002. It was only after 2002 that the Vietnamese shipbuilding started to increase by an average of 434% each year, reaching 62 vessels totalling 0.84 million cgt in 2006 (WSM 2007). The current Vietnamese orderbook stands at

²⁷

The cgt measure was developed by a number of major shipbuilder associations, and adopted by the OECD's Council Working Party on Shipbuilding as a means of better reflecting the relative large aggregate output of merchant shipbuilding activity.

2.2 million cgt (around 4.8 million dwt) and was the 8th largest in the world as of December 2007, suggesting that this is still growing.

Table 11. Total World Newbuilding Orderbook – December 2007

| Country of Building | No | gt (000s) | cgt (000s) |
|---------------------|---------------|----------------|----------------|
| South Korea | 2,242 | 126,530 | 63,388 |
| China | 3,139 | 97,761 | 50,216 |
| Japan | 1,495 | 63,814 | 30,714 |
| Germany | 203 | 4,165 | 3,775 |
| Italy | 118 | 2,570 | 2,945 |
| Philippines | 116 | 5,160 | 2,489 |
| Turkey | 337 | 2,348 | 2,341 |
| Vietnam | 206 | 3,203 | 2,143 |
| Romania | 146 | 3,043 | 2,121 |
| India | 246 | 2,615 | 2,030 |
| Chinese Taipei | 67 | 2,838 | 1,683 |
| Poland | 122 | 2,031 | 1,673 |
| Croatia | 69 | 1,997 | 1,201 |
| Denmark | 23 | 1,462 | 0.662 |
| Rest of the World | 1,527 | 10,190 | 10,320 |
| Total | 10,055 | 329,731 | 177,740 |

Source: Lloyd's Register Fairplay (December 2007).

97. In keeping with experience in other economies, Vietnamese shipbuilders have a strong orderbook, which may sustain its industry for some years. On the basis of this strong backlog the Vietnamese shipbuilding industry has been improving its quality and its share of sophisticated vessels and high value-added ships such as PCC and FSO vessels. In terms of dwt, the Vietnamese orderbook was 4.4 million dwt at the end of 2007, which compares very favourably with the position at the end of 2003, when it only held orders totalling 150 000 dwt. Table 12 provides details by vessel type of that orderbook, which covers 194 vessels, of which around 70% are for foreign owners.

Table 12. The Orderbook of Vietnamese Yards

| Type of Vessel | No | gt | cgt | dwt |
|-------------------------------|------------|------------------|------------------|------------------|
| Bulk Carrier | 61 | 1 676 865 | 896 568 | 2 832 802 |
| Crude Oil Tanker | 5 | 312 000 | 129 797 | 535 000 |
| Container Vessel | 13 | 120 796 | 121 071 | 153 400 |
| General Cargo Vessel | 87 | 321 536 | 425 839 | 469 877 |
| Vehicles Carrier | 12 | 592 000 | 346 296 | 165 600 |
| Chemical/Oil Products Tankers | 12 | 131 994 | 127 945 | 210 900 |
| LPG vessels | 4 | 17 600 | 29 596 | 19 840 |
| Total | 194 | 3 172 791 | 2 077 112 | 4 387 419 |

Source: Lloyd's Register Fairplay (December 2007).

Financial performance of yards

98. Vinashin's revenue has grown significantly in recent years, boosted by a steady inflow of orders. This growth reflects its growing stature in the global market and has been facilitated by its significant investments, its many joint ventures and the inflow of technical assistance. In 2006, the government announced a plan to restructure Vinashin as a multiple-owner business organisation with the state holding a majority stake. It was envisaged that the organisation would be comprised of state-owned enterprises, joint stock companies and foreign joint ventures and would provide the framework for any future investment in new companies. The ultimate aim of the initiative was to increase financial performance of yards and sharpen competitiveness in the world market. (Lloyd's List 2007)

99. Vinashin reported revenues of nearly VND 11 700 billion (USD 731.25 million) in 2006, which was 47.9% higher compared to the previous year. In 2007, it was targeting revenues of VND 18 500 billion (USD 1.16 billion) - see Table 13

Table 13. Vinashin Revenues (in billions VND)

| Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Revenues | 1 010 | 1 303 | 2 515 | 3 173 | 5 560 | 7 708 | 11 500 | 18 500(est) |

Source: Vinashin.

100. The turnover of Hyundai - Vinashin Co. Ltd (HVS) in 2006 was ten times that of 1999, and increased on average by 37% annually. More than 80% of the company's turnover was from foreign clients. In 2007, HVS was targeting revenues of USD 144.5 million, an increase of 10.1% compared to 2006.

Productivity and competitiveness

101. Increasing productivity is one way to keep costs down. In the broadest sense, the shipbuilding industry increases productivity by incorporating process enhancements or through modernisation, or by a combination of both. Process improvements include any changes that affect employee training, quality control and manufacturing flow. Since shipbuilding involves a complex production process, the level of efficiency (and therefore costs) can vary considerably from one yard to another.

102. Material cost and availability are significant factors, and major shipbuilding economies can support a very wide range of material and equipment suppliers. Shipyards in areas with little shipbuilding activity have a more difficult time, and so one of Vinashin's objectives is to cover 60-70% of the cost of construction of a newbuilding with domestic material and equipment (BLP 2005). Heavy investments are envisaged, including steel works able to manufacture steel plates for ships, in order to achieve that target.

103. Although attention often focuses on the shipyard facilities as the main determinant of competitiveness, in reality there are many factors, such as material supply, facilities, skilled labour, wages, labour productivity, exchange rates and subsidies that play a part in determining how many ships are produced, how much they cost and the revenue received by the shipbuilder. Shipbuilders in countries that have access to cheap resources can be competitive in the low value-added shipbuilding market. At present Vietnam has the potential to capture considerable market share of low value-added ships because of the low cost of inputs such as labour and land.

104. However, the competitiveness of the Vietnamese shipbuilding industry would be tested if a slowdown in world demand for newbuildings were to coincide with the bringing on-line of significant new shipbuilding capacity in Vietnam and other shipbuilding centres.

105. Signals from the market are that worldwide shipbuilding capacity has been increasing significantly in response to the buoyant market. For example, according to data from the China Association of the National Shipbuilding Industry (CANSI)²⁸ shipbuilding capacity in that economy will exceed 40 million dwt a year in 2010, if new yards planned by investors are completed. In addition, the total world shipbuilding capacity is expected to reach 115 million dwt by that time. If this eventuates it can be speculated that competition from emerging low-cost shipbuilding nations such as Vietnam and China will force the EU, Japan and Korean shipyards to become even more efficient and technologically sophisticated in order to stay ahead of their competitors.

106. Very high capacity and declining demand will also generate strong competition amongst the new entrants in the shipbuilding industry for available orders in their specific market niches, and here Vietnam will be in direct competition with China, India, the Philippines and other emerging shipbuilding economies. It remains to be seen whether the nascent Vietnamese shipbuilding sector will be sufficiently flexible and competitive to continue to carve out a growing international as well as domestic market share.

RECENT GROWTH IN VIETNAM SHIPBUILDING

Investment

107. WTO membership is expected to have positive effects on inward foreign investment in Vietnam because it strengthens the economy's openness and expands the market size. In general, economies open to trade are attractive to foreign investors for two main reasons: the openness signals that the government has policies in place that welcome both trade and (by implication) competition, and it helps reassure investors that they can repatriate their profits. By joining the world trade bodies, Vietnam not only commits itself to further reforms but also aligns its rules and regulations with international standards and practices. Foreign investors now generally enjoy equal footing with their domestic counterparts in the legal environment, while trade-related restrictions on investment have been removed. With lower tariff barriers, the cost of doing business in Vietnam will be lower than it used to be, which will help boost the competitiveness of local production (MFA 2006).

108. Vinashin continues to make significant investments in its shipbuilding sector in order to speed its development and some information on recent new shipyard projects in Vietnam is given below:

- Cam Ranh yard is located in the central Khanh Hoa coastal province and is being constructed by Nha Trang SICO with around USD 200 million being invested in a two phase project. It will be capable of building large passenger ships and cargo freighters of 50 000 dwt and provide jobs for 4 000 people.
- The Ca Mau Shipbuilding Industry has started the construction of a shipyard in order to build vessels of 30 000 dwt for export purpose in Ca Mau Province in March 2007. The dockyard is scheduled for operation in 2008 and will employ around 3 000 workers.
- The construction of Binh Dinh shipyard is to start in 2007. Modern technology will be applied so that the shipyard will be capable of building 50 000 dwt ships and repairing 100 000 dwt ships. It will employ 2 000 workers when the first stage is completed.
- The Thnh Long (includes Think Long 1 and Think Long 2) shipbuilding complex will be the biggest project of Vinashin in Nam Dinh. The construction of a 193 -hectare complex will cost an

²⁸ Reported in Asia Times Online 06/07/2007 in the article '*China's shipbuilding wave continues to rise*' available at http://www.atimes.com/atimes/China_Business/IG06Cb01.html

estimated USD 100 million, with a capacity for 15 000–30 000 dwt vessels. It will also include factories manufacturing rolled-steel, ship components and cranes.

- The Song Hong shipyard has an investment of 16.5 million USD covering 10.4 hectares in Hanoi and is funded by the State budget and commercial loans in the first phase. Once operational in January 2008, the shipyard will be capable of building 2 000 dwt cargo and 250-seat passenger ships. The second phase of the project is expected to be completed in 2010, capable of constructing 6 500 cargo vessels

FUTURE PLANS

Green-field developments and modernisation/expansion plans

109. Vinashin has established a new subsidiary - Vinashin Offshore Industries (Vinaoffshore) in Ha Noi - which will focus on manufacturing floating storage and off-loading (FSO) units, single print moorings, oil drilling vessels and other heavy equipment.²⁹ Also the group is set to move into the very large crude carrier business with letters of intent signed with domestic and international ship owners for up to eight tankers worth more than USD 800 million.

110. Vinashin plans to turn the Nam Trieu shipyard into an industrial complex has been planned in two phases. The first phase, lasting from 2000 to 2006, was focused particularly on building slipways capable of constructing vessels up to 100 000 dwt. The second phase, until the year 2012, includes the construction of a new shipyard that will be capable of building vessels of up to 350 000 dwt in the Tien Lang district of the Haiphong.

111. In future, the share of sophisticated vessels in the Vietnamese orderbook is expected to increase as a result of recent developments, such as the investments made by Aker Yards and the co-operation with Hoegh Autoliners. Also, Damen Vinashin Shipyard is expected to focus on special type vessels such as tugs, offshore vessels and high-speed craft, creating new export opportunities.

SUMMARY AND CONCLUSIONS

112. Vietnam is one of the fastest-growing economies in Asia, recording an average GDP growth of about 7.5% over the last decade, and 8.3% in 2007. With its accession to the WTO in January 2007, Vietnam entered in a new phase of development, characterised by deeper integration into the global economy, with its associated opportunities and challenges. The outlook in the medium term is also positive, with the economy predicted to grow by 8.5% in 2008, and prospects for the economy are predicated on the assumption that Vietnam will maintain the momentum of structural reforms. The strong demand for new vessels over the last few years has also stimulated the interest of newly industrialising economies, like Vietnam, in shipbuilding. The shipbuilding industry produces considerable demand for many other associated industry products, and it also makes useful contributions to related industries such as steel assembly, welding technology, system designing and so on.

113. Shipbuilding has been, and continues to be, is an important and strategic industry for many economies. Japan used shipbuilding to rebuild its industrial structure after World War II, while Korea made shipbuilding a strategic industry in the 1970s. China is now following Japan and Korea with large state-supported investments in the industry, and has plans to become the world's largest shipbuilding nation by 2015. These developments highlight the enormous role that shipbuilding can play in developing national economies. Vietnam, largely through the conglomerate Vinashin, has made significant investments in its shipbuilding infrastructure and is actively seeking partners to speed its development.

²⁹ Information from www.marinelink.com

The benefits offered to a shipbuilding partner include competitive prices, greater control over the vessel's design and a valuable role in a growing market for new buildings.

114. Vietnam has low wage levels and high literacy rate. The political situation is stable and the government intends to push the economic development. Investors are being given favourable conditions and the country has an advantageous geographical location in Southeast Asia.

115. The modern trend is for yards to seek partnerships with foreign yards, or to take over facilities outside their domestic region in order to become and remain competitive. This process of construction “globalisation” allows mature shipyards to carry out expansion and diversification at relatively low cost, and to take advantage of the lower costs of inputs found in developing economies,

116. Vietnam is increasingly the destination of choice for such investment, and is positioning itself to be increasingly attractive to both domestic and foreign investors. In turn, foreign participation increases the ability of Vietnamese yards to build increasingly specialised vessels through technology and skills transfer packages that further contribute to Vietnam's shipyard expansion.

117. For its part the Vietnamese government supports the rapid development of its shipbuilding industry, as this will lead to growth in other industries and will shorten Vietnam's industrialisation process. At present Vietnamese ships contain just over one-third local content, which includes labour, welding materials and furnishings, so they are very reliant on imports of components such as major equipment and machines. This increases the price of vessel construction and slows down production. The local shipbuilding industry should benefit considerably from the support being provided by other related domestic industries, and Vinashin is striving to achieve targets set by the Government to increase domestic input to 60-70% by 2020.

118. The Vietnamese Government issued its first sovereign bonds to the international market in 2005, passing the entire USD 750 million that was raised to Vinashin for investment in raising the capacity of its yards and the quality of its manufacturing operations. To use these funds Vinashin has adopted a long-term development strategy that focuses investments on key developments. As a result, the Group has effectively upgraded and expanded many existing shipyards and constructed new shipyards in support of the development of industrial zones throughout the country.

119. Vinashin's Shipbuilding Science and Technology Institute (SSTI) has been upgraded to a Centre of Ship Research & Design, with its new ship model basin model basin that is recognised as a leading national maritime laboratory.

120. While Vietnam has a significant competitive advantage from its supply of relatively skilled, low cost labour, it needs to build on that advantage through increasing productivity and an effective downstream components industry, as well as by establishing a reputation in the industry for technologically capable, high quality vessels produced on contracted time and cost. These developments remain a challenge for the Vietnamese government and its shipbuilding industry, and will be helped in these tasks by continuing to provide a business friendly investment that will continue to attract FDI, technology and the transfer of business and other skills.

REFERENCES

- ABS (American Bureau of Shipping) (2007), *Surveyor Fall 2007*, A quarterly magazine from ABS.
- ADB (Asian Development Bank) (2007), *Asian Development Outlook 2007*, ADB, Hong Kong available at www.adb.org
- AMEM (Austrian Marine Equipment Manufacturers) (2005), *Polish Shipyards*, AMEM Communication http://www.amem.at/pdf/AMEM_Communication_018.pdf
- ASEAN (Association of Southeast Asian Nations) (2005), *Promoting Efficient and Competitive Intra-ASEAN Shipping Services, Vietnam Country Report*, available at: <http://www.aseansec.org>
- ASIA INVEST (2002), *Guidebook for European Investors in Vietnam*, European Commission Asia Investment Facility, Luxembourg.
- BLP (Business Linkage Program) (2005), *The Vietnamese Shipbuilding Industry: Opportunities for Danish firms to invest in Vietnam through the privatisation of State Owned Companies*, report from Hanoi Embassy of Denmark.
- Borgersen, A. (2004), *Studies on Private Sector Development and Business Opportunities for Norwegian Industry and Trade in Vietnam*, report from NHO appointed team.
- Brewer, S. (2006), *Vietnam: looking to the top*, DNV maritime news.
- Dapice, D. (2007), *Fear of Flying: Why is Sustaining Reform so Hard in Vietnam?*, Department of Economics, Tufts University.
- European Commission (2006), *Report on Vietnam 2006*, European Union Economic and Commercial Counsellors, Hanoi. Available at: www.delvnm.ec.europa.eu/en/eco/reports.htm
- FRD (Federal Research Division) (2005), *Country Profile: Vietnam*, FRD, Washington DC. <http://lcweb2.loc.gov/frd/cs/profiles/Vietnam.pdf>
- GL (Germanischer Lloyd) (2008), *Germanischer Lloyd nonstop*, The magazine for customers and business partners, Edition 2008/1.
- Huan, H.V. (2007), *Central Vietnam Rising as an Attractive Address for Investment*, Presentation by Investment Promotion Center North Vietnam
- Huyen, H.K. and Binh, T.C. (2007), *Vietnam Country Report*, Industrial Development Planning by Local Government: Cluster-Based Development Approach Policy Seminar.
- ILO (2007), *Labour and Social Trends in ASEAN 2007 Integration, Challenges and Opportunities*, International Labour Office, Bangkok, available at www.ilo.org

- Kirkbride, M.(2005), *Do as I say, not as I do. The unfair terms for Vietnam's entry to the WTO*, Oxfam Briefing Paper 74, Washington.
- Lloyd's List (2007), *Vinashin makes inroads into the global market*, article from Lloyd's List maritime paper dated 30.08.2007.
- LR (Lloyd's Register) (2005), *Horizons, Technical News and Information for the Marine Industry*, Issue 14, London.
- LR (Lloyd's Register) (2007), *World Shipbuilding Statistics, December 2007*, Lloyd's Register-Fairplay Ltd, UK.
- MFA (Ministry of Foreign Affairs) Vietnam (2006), *WTO Accession - A New Stage of Development for Vietnam, Special Bulletin*, Department of Economic Affairs, Hanoi, pp 30.
- MFA (Ministry of Foreign Affairs) Vietnam (2007), *Vietnam: New Centre for Success*, Department of Economic Affairs, Hanoi.
- MPI (Ministry of Planning and Investment) Vietnam (2006), *The Five Year Socio- Economic Development Plan of Vietnam 2006 – 2010*, Ministry of Foreign Affairs, available at: <http://www.mpi.gov.vn/plans.aspx?lang=2&magoc=123&machude=4>
- Meyer, K.E. (2005), *Doing Business in Vietnam*, Working Paper No:58, Copenhagen Business School, Denmark.
- NORAD (Norwegian Agency for Development Cooperation) (2003), *Study on Private Sector Development and Prospects for Norwegian Trade and Investment Interests in Vietnam*, NORAD Report 6/2003, Oslo, at: www.norad.no
- Otsuka, K. (2006), *Cluster-Based Industrial Development*, Foundation for Advanced Studies on International Development Seminar Report, Hanoi.
- Platou (2008), *The platou report 2008*, R.S. Platou Economic Research A.S.
- SEAISI (South East Asia Iron and Steel Institute) (2007), *SEAISI Newsletter*, at: www.seaisi.org
- Thuyen, V. and Hang, N. (2007), *Industrial Development Planning by Local Government: Vietnam Country Report*, Cluster-Based Development Approach Policy Seminar, Tokyo.
- UNCTAD (United Nations Conference on Trade and Development) (2006a), *World Investment Report 2006: FDI from Developing and Transition Economies, Implications for Development*, Report by the UNCTAD Secretariat, United Nations New York and Geneva.
- UNCTAD (United Nations Conference on Trade and Development) (2006b), *Review of Maritime Transport 2006*, Report by the UNCTAD Secretariat, United Nations New York and Geneva. Available at: http://www.unctad.org/en/docs/rmt2006_en.pdf
- UNCTAD (United Nations Conference on Trade and Development) (2006c), *Handbook of Statistics 2006*, Report by the UNCTAD Secretariat, United Nations New York and Geneva. Available at: <http://www.unctad.org/Templates/Page.asp?intItemID=1890>

US Foreign Commercial Service – Hanoi (2005), *Education and Training*, Report by American Embassy in Vietnam. Available at: www.buyusa.gov/vietnam/en/153.pdf

US Foreign Commercial Service and Department of State (2005), *Doing Business in Vietnam: Country Commercial Guide for US Companies*, available at www.buyusa.gov/vietnam/en/140.pdf

US Department of State (2007), *2007 Investment Climate Statement Vietnam*, available at: <http://www.state.gov/e/eeb/ifd/2007/80763.htm>

VDF (Vietnam Development Forum) (2006), *The Second VDF-Tokyo Conference on the Development of Vietnam*, Japan Graduate Institute for Policy Studies, Tokyo.

Vinashin Business Group (2006), *Vinashin Business Group commercial presentation*, Danish Export Association. Available at: <http://www.dega.dk>

WSM (World Shipyard Monitor) (2007), *World Shipyard Monitor*, May 2007, Volume 14, No.5, Clarkson Research Services Limited, London.