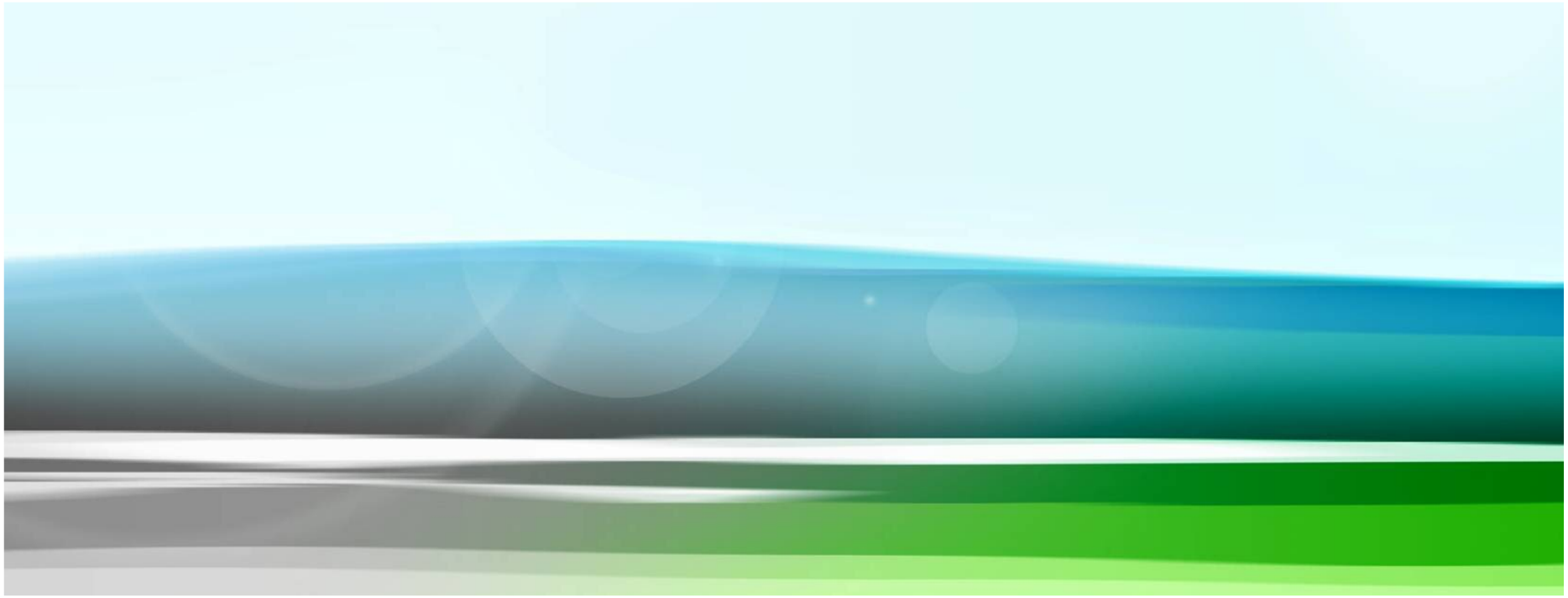

Future Of Ship Building - India

Institute Of Marine Engineers – 03-02-2012

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MANAGING RISK DNV

GLOBAL SHIPBUILDING

- Shipbuilding has historically witnessed a robust growth in demand for new vessels.
- Growth Rate between 1980 to 2005 is around 6 percent, higher than most manufacturing industries.

REASONS

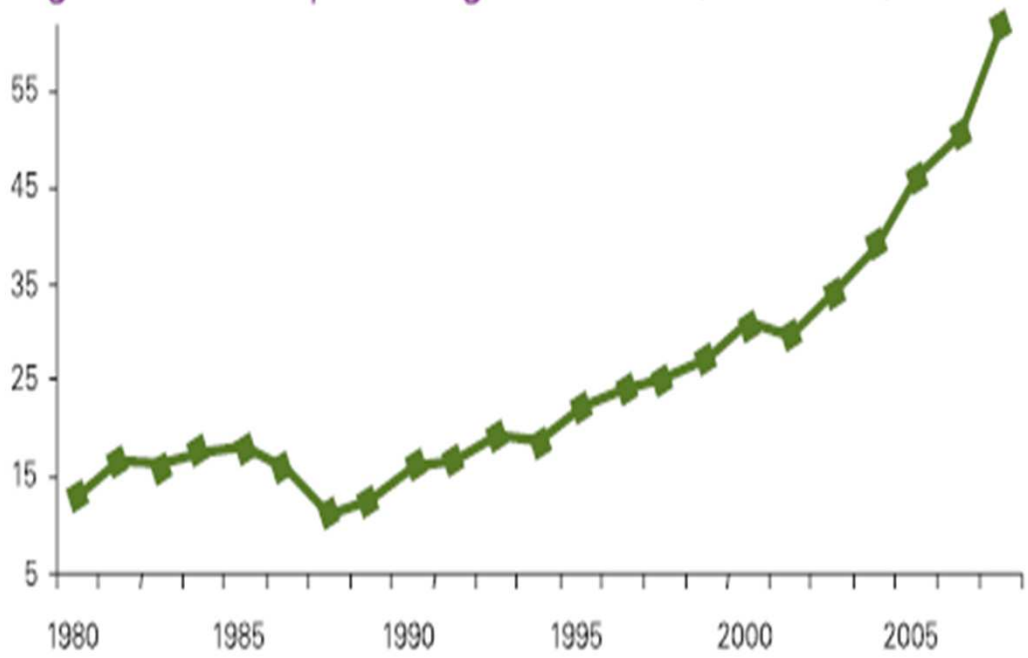
a. Commodity driven trade growth

b. Super-sizing

c. Replacement of ageing fleet

d. Conversion of single hull tankers

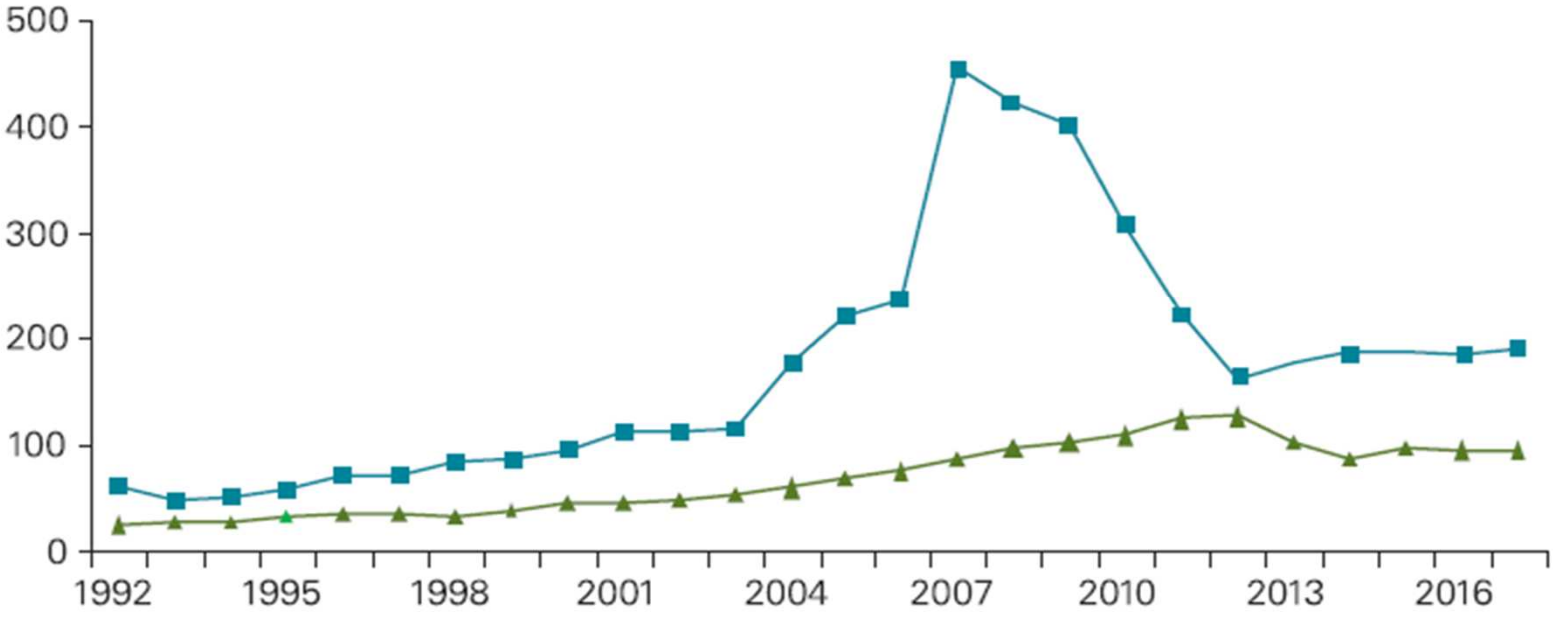
Fig.1 Global shipbuilding deliveries (in mn GT)



Growth Likely to Continue

- Shipbuilding demand growth is likely to demonstrate continued healthy growth.
- Sea borne trade growing at healthy rate of 4 percent.
- In 2012, we expect the shipbuilding market to stabilize, thereafter the demand should return to its secular growth.

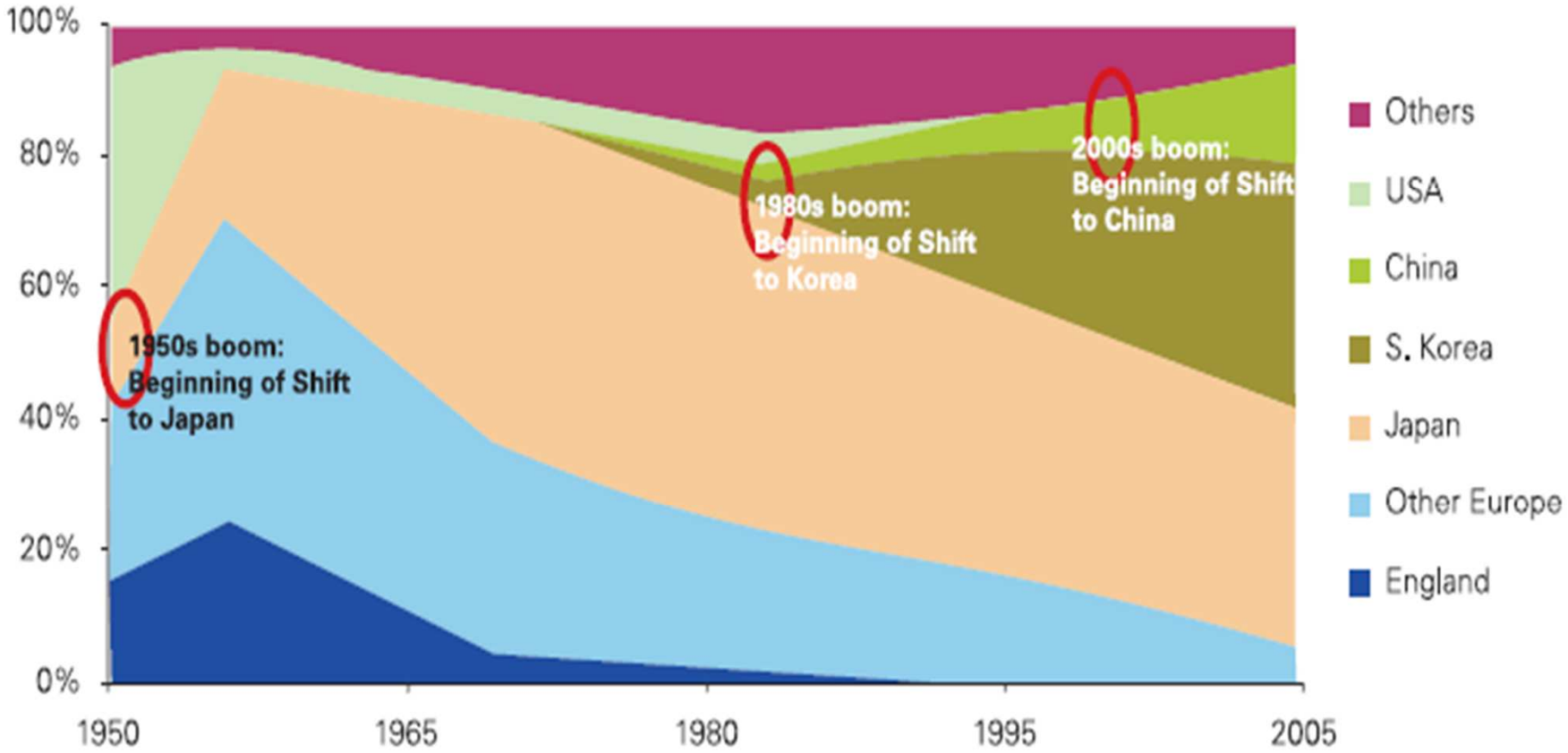
Fig. 3 Global shipbuilding order book and deliveries (in mn DWT)



Source: Clarkson's Data, KPMG Analysis

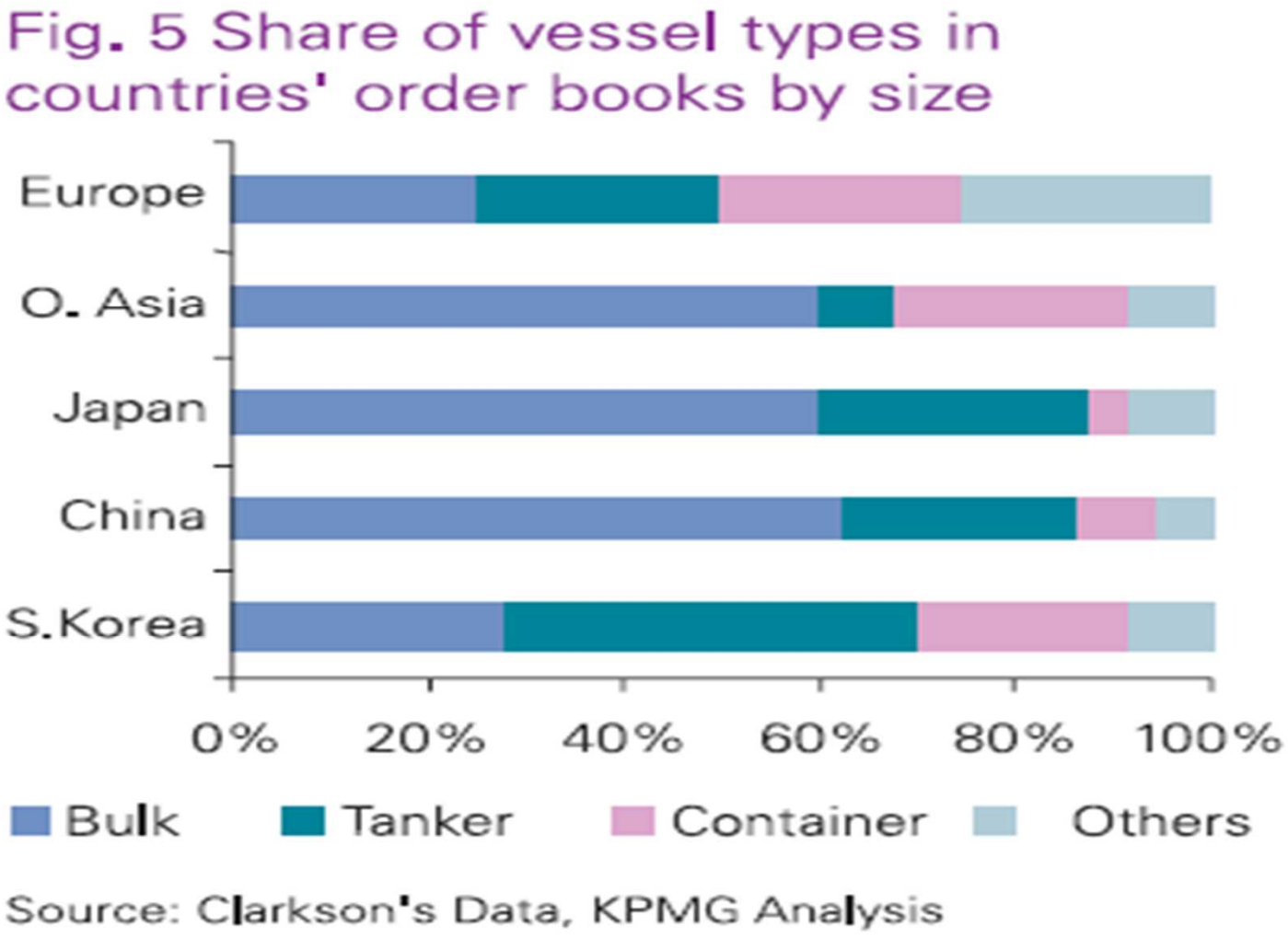
New Destinations

Fig.4 Share of different countries in deliveries



Source: www.shipbuildinghistory.com, KPMG Analysis

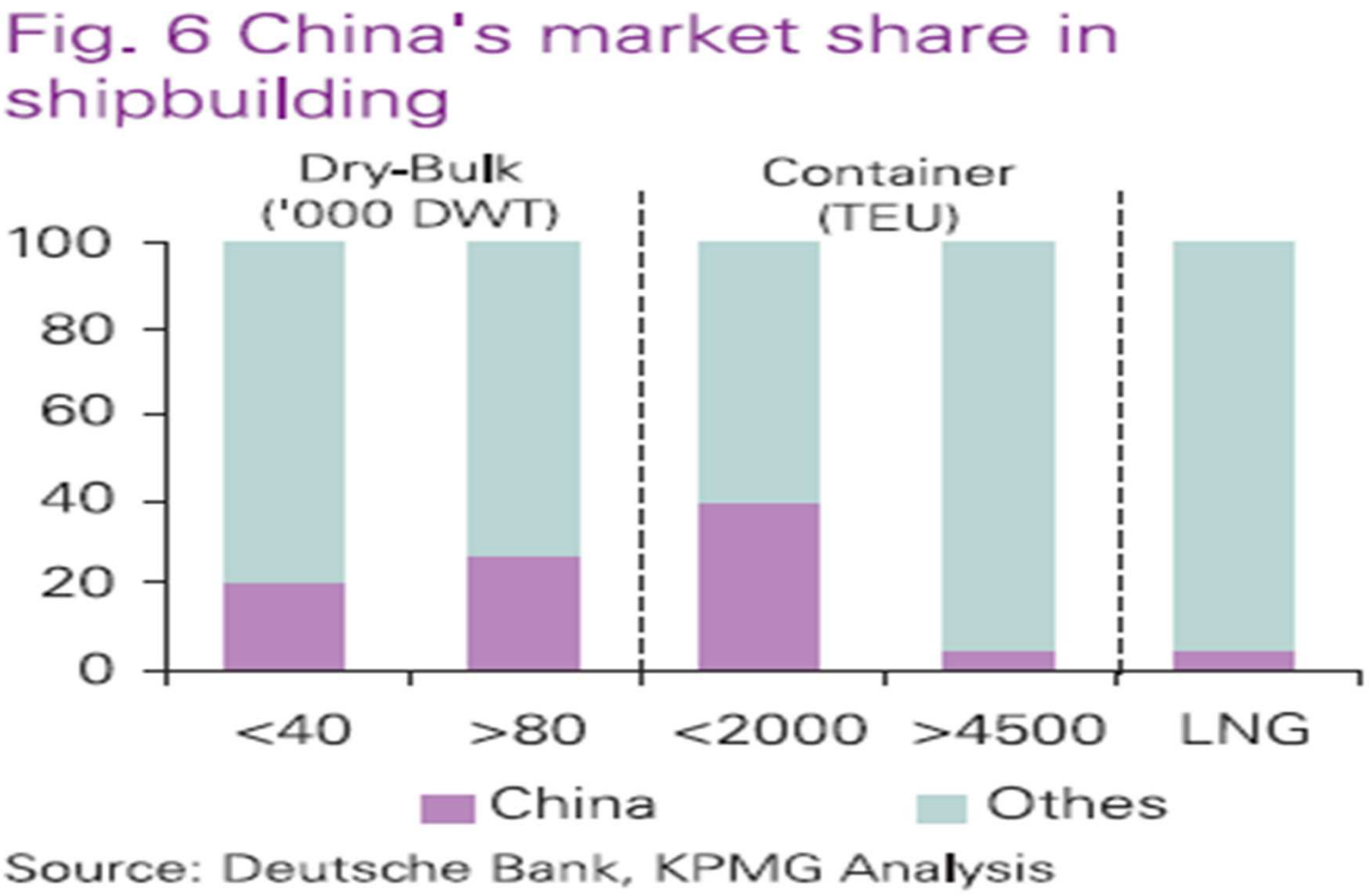
Global Shipbuilding Distribution



CASE STUDY: China's Success

- Within a span of 5 years China has become the second largest shipbuilding nation after South Korea.
- China aims to be the leading shipbuilding nation by 2015. The Chinese Government through its two large companies – CSSC and CSIC and host of other public/private shipyards is adding massive capacities.
- The Government favours domestic shipping lines such as COSCO purchasing ships from Chinese shipyards and provides them with discounts and economical credit.
- China's biggest advantage is low labour cost which is 50% of Korean and Chinese labour.
- China is the cheapest manufacturer of steel in the world which also helps yards to reduce costs.
- However, China still imports 60 percent of raw materials. Aims to reduce it to 30%.
- China lacks technology to build complex vessels. Chinese yards are tying up with Korean and Chinese yards and focussing on simple vessels.

China’s Success



The Indian Growth Story

- The year 2002 served as a water-shed for the Indian Ship-building industry.
- Government of India introduces a subsidy scheme for both public and private sector shipyards.
- The subsidy was targeted at addressing the distortions of the domestic economic environment which impacts domestic shipbuilders adversely as well as addressing the impact of direct and indirect support provided to shipyards in other countries.
- With global shipbuilding witnessing the upward trend. Indian shipbuilding has been able to take advantage of the government support and has done well to establish its presence in global shipbuilding.
- Having gained some experience and credibility with international buyers, Indian yards are now graduating from smaller vessels such as OSV/PSV to large vessels such as bulk carriers.

Indian Growth Story

Table 1. Performance of Indian Yards (INR mn)

Period	Order Book	Turn Over	Investment
1997-2002	8,160	10,170	430
Between 2002-2007	148,770	36,570	8,430
Percentage difference	1,723%	259%	1,860%

Healthy Growth – New Players

- Spurred by this recent growth, several companies are setting up ship building capacities
- Most existing yards like ABG and Bharati are expanding capacity and undertaking green-field expansion.
- Port companies mainly Adani and SKIL are at different stages of developing shipbuilding facilities.
- Finally, related heavy industry players are also planning to grab a share of this market. The segment includes engineering giants like L&T, and steel makers TATA and JSW.
- The overall announced investment of the upcoming private yards exceeds INR 200 billion, all coming online within next 2-3 years.
- Indian Navy and Coast Guard also looking forward to the domestic shipbuilding industry to help them realize the goal of complete indigenization.

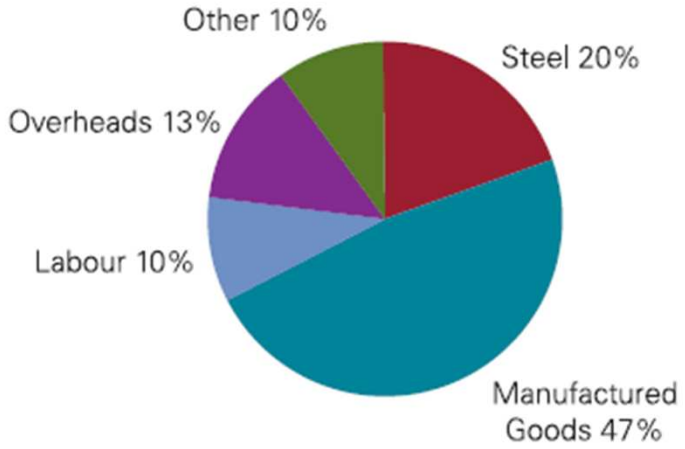
Competitive Advantages

- Low Labour Cost
- Strong Domestic Demand
- Supporting industry infrastructure for some components
- Long Coastline

- Labour Cost -

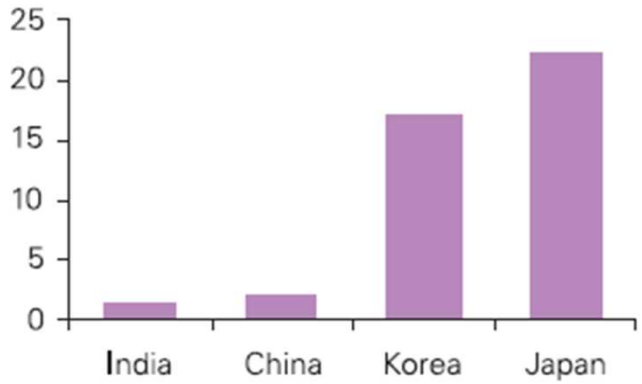
- Low labour cost is a key driving factor in shipbuilding nations as it accounts for more than 10% of the total cost.
- Indian labour costs are on the lower side as compared to those of the leading shipbuilding nations. Even after factoring the impact of productivity, Indian labour is significantly cheaper than Korean and Chinese labour.
- More importantly, Indian labour is growing at half the rate as in China, giving us a definite edge in the future.

Fig. 7a Share of various inputs in Guangzhou yard, China[12]



Source: BNP Paribas, KPMG Analysis

Fig. 7b Cost of Labor in 2008 (USD/ day)



Source: EIU, KPMG Analysis

- Strong Domestic Demand –

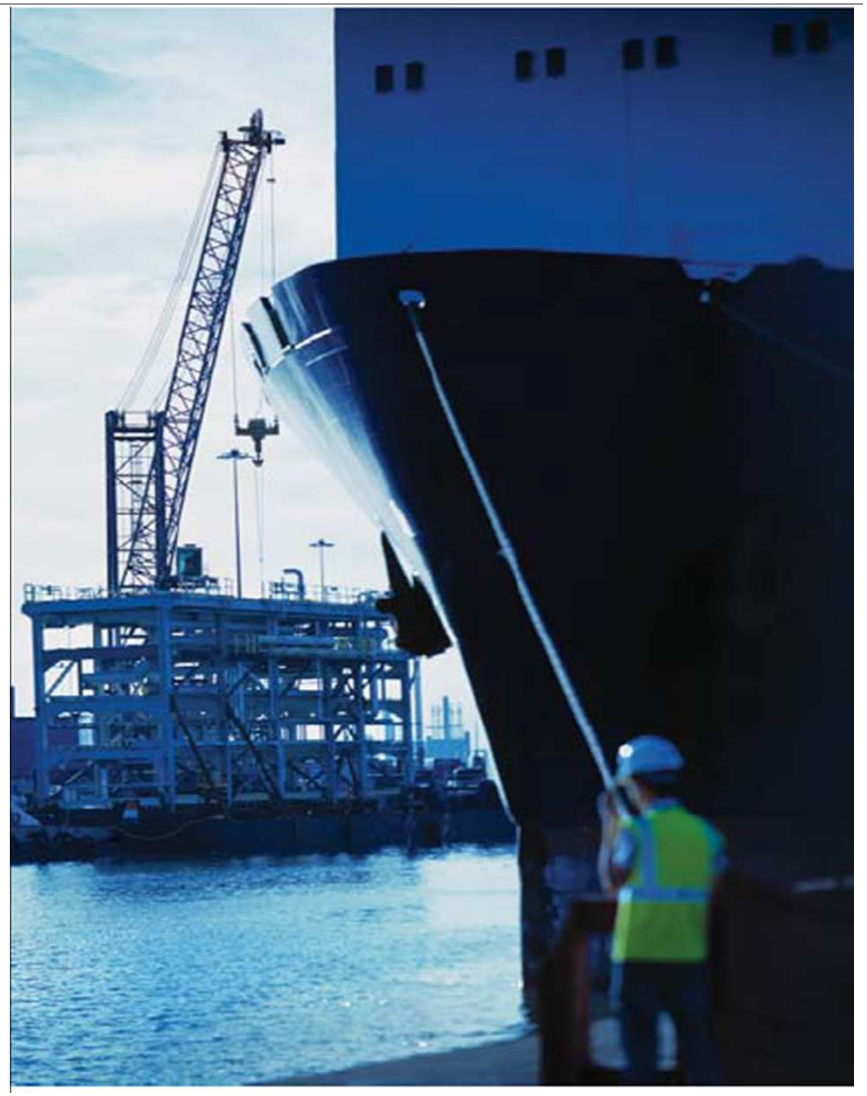
- Indian Shipping Trade is booming at the back of economic growth at the rate of approximately 8%.
- Domestic shipping lines are expanding their fleet size and have placed their orders with global yards.
- There is also a strong thrust on sectors like power and steel with companies looking to acquire ships to control transport from international mines.
- Indian Government's new initiatives in coastal trade and IWT, is likely to further boost demand for new ships. New ports and IWT lanes would require dredging and further port-related vessel support.
- Finally, the ongoing off-shore exploration are expected to create demand for rigs, OSVs and PSVs.

- Supporting Industry -

- India has domestic industries which can produce some of the raw materials required of shipbuilding.
- Specifically, India has competitive steel manufacturing, light engineering and IT/ITES industries which can offer the required products at economical costs.
- These industries are currently not producing goods for shipbuilding sector, mainly due to lack of scale of shipbuilding industry in the country.

Regulatory Hurdles

- Statutory Burdens
  1. Levies
  2. Indirect Taxes
- Financing Costs
  1. Bank Guarantees
  2. Working Capital
- Other Costs



Statutory Burdens

- **INDIRECT TAXES**

Service Tax @ 10.3% is applicable on all design and engineering services procured by the shipyards during the course of shipyard construction.

In countries like China, a lump sum VAT is applicable, which is later refunded.

- **LEVIES**

OCTROI, CST, VAT and excise are some of the levies applicable to shipyards. Several shipbuilding nations have relaxed these levies to encourage shipyards.

China refunds VAT completely on domestic sale of ships. Lack of such incentives leads to an additional burden of 8 percent for domestic sales and around 3 percent for exports.

Financing Costs

- **BANK GUARANTEES**

Shipyards are required to provide bank guarantees to protect the ship buyer.

In China, the government provides sovereign refund guarantees for certain class of vessels, thus removing any related burden on the shipyard.

- **WORKING CAPITAL**

Typically, a shipyard requires a working capital of around 25-35 percent of the cost of the ship during the construction period.

The interest on working capital in India averages 10.5 percent. In contrast, the interest rates presently offered to shipbuilding yards overseas are significantly lower at around 5-6 percent in Korea and 4-8 percent in China.

CASE STUDY – China's Support to Ship Building

1. Loss reimbursement to domestic shipbuilders such as Dalian Shipyard
2. Scrapping aid on all ships produced during 1972-2001
3. Support in Acquiring land. Preferential rates on acquisition. Capital Tax subsidies provided. VAT refund is present up to 17 percent
4. Exchange Rate Control
5. Incentives to encourage shipbuilding industry development at Liaoning Shipbuilding Zone
6. Circular on accelerating shipbuilding industry development in Zhejiang province
7. Tenth five-year development plan for shipbuilding industry. Interim Provisions on Promoting Industrial Structure Adjustment.

CASE STUDY – China's Support to Ship Building

Indian Context

- Following are some of the options that the State and Central Government can use as supporting measures :

1. Direct Subsidy against contract prices.
2. Provision of refund guarantees.
3. State funded or subsidised innovation, R&D to develop ship design, shipbuilding technology or shipyard production expertise.
4. Working capital finance on subsidised interest rates or interest-free loans, underwriting debt to reduce the commercial risk.
5. Preferential tax schemes for ship owners or shipyards.
6. Exchange rate control for shipyards – this reduces one of the key risk factors.
7. Incentives to ancillaries – e.g. steel manufacturers, engine builders or equipment suppliers.

Government support is critical till Indian shipbuilding industry gains critical volumes to remove its scale related disadvantages and removes its dependence on imports for raw materials.

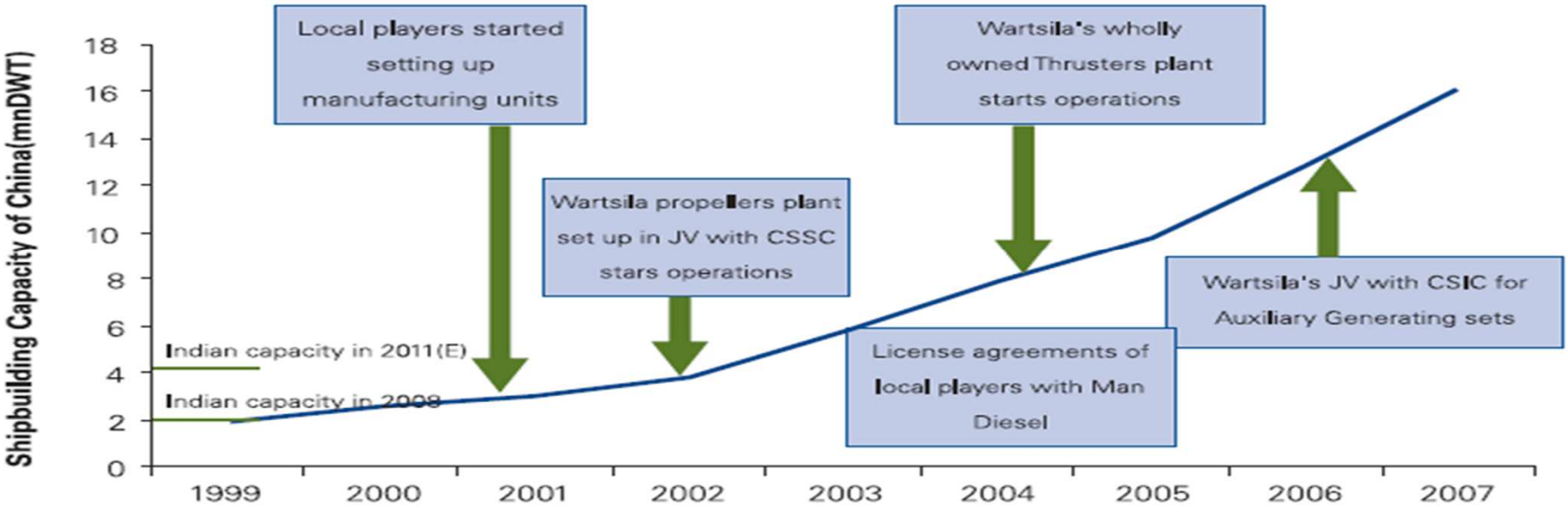
Development of an Ancillary setup

- Ancillary industries usually lag the development of shipbuilding industry.

CASE STUDY - CHINA:

Most globally reputed companies started establishing in China after 2002 when it crossed a capacity of 5mn DWT. Even then most of these are joint venture with leading local shipyards to mitigate risk and tie-in customers.

Fig. 9



Source: KPMG Research

Positives for Indian Shipbuilding

- India is a recognized as a global player in light engineering and a major base for auto ancillaries. This has created a well established pool of engineering graduates and supplier companies to such industries.
- India can be used by ancillary companies as a global production base catering to local ship builders as well as the global market.
- Some Signs :

- MAN Diesel has set up an engine plant at Aurangabad and Wartsila is in negotiations with several domestic shipyards.
- ROLLS ROYCE has set up an electronic and communications plant in Navi Mumbai.

However, for India to have a sizeable setup, domestic demand has to reach a critical mass to sustain global interest. Also the shipbuilding industry needs to be proactive.

Multiple Benefits of Shipbuilding

- The growth of domestic shipbuilding, which today imports 45% of its input requirements can provide a major trigger for large scale indigenization of heavy engineering products and ancillaries.
- Indian Shipbuilding industry has demonstrated aspirations to acquire a 7.5% share in global shipbuilding by 2017, which is expected to have a size of 500mn DWT. Analysis suggests that this will require Indian Shipbuilders to invest close to INR 200 Billion in new yard capacity.
- This INR 200 Billion investment in shipbuilding can trigger additional investment of INR 2200 billion in related sectors such as steel and related engineering goods.
- Likewise, shipbuilding is likely to generate a revenue of INR 800 billion and an overall revenue of INR 3300 billion including associated sectors.
- This revenue could provide around INR 250 billion taxes for the Government.
- Employment to the extent of 0.4 million new direct jobs in shipbuilding and around 2.4 million new jobs can be generated.

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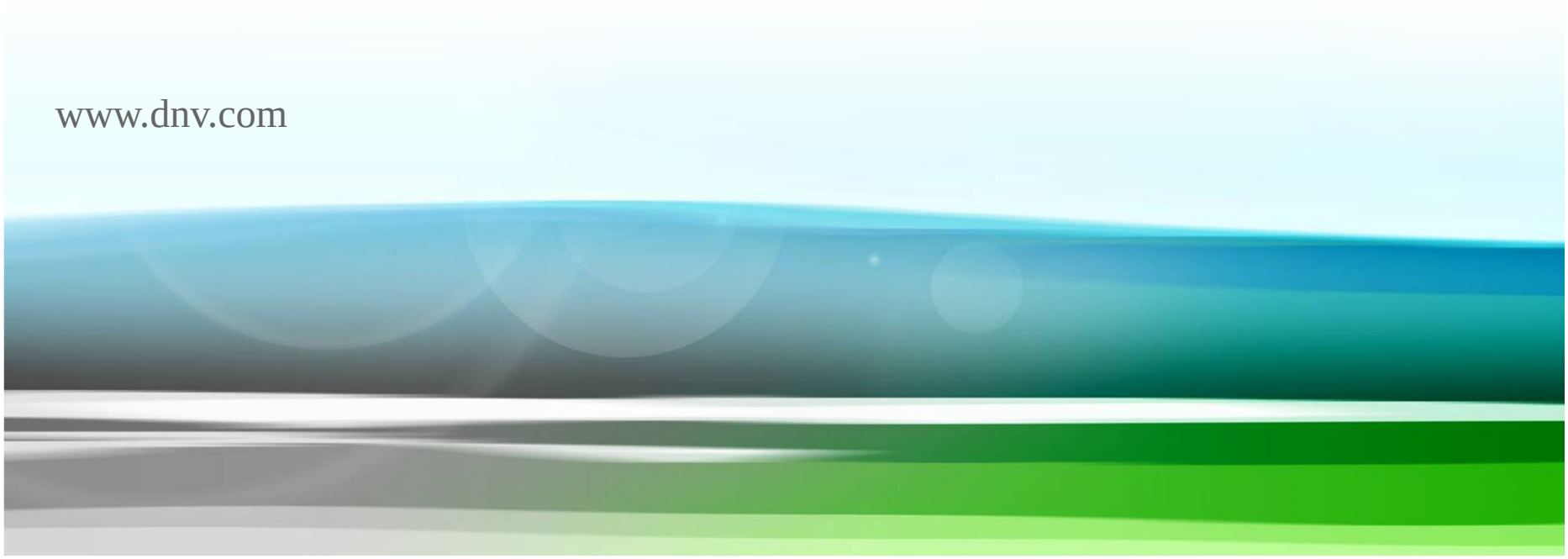

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