

# South Korea and Malaysia Shipbuilding Industry Historical and Technical Comparison

1<sup>st</sup> National Marine Industries Forum  
Hotel Istana  
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# Why South Korea?

## 1. Geographical

- ◆ Both are peninsular
- ◆ One is in East Asia and the other is in South East Asia

## 2. Socio-economic

- ◆ Korea is now an OECD member
- ◆ Malaysia is still considered a third world country

## 3. History

- ◆ Similarities
  - Both gain total independence in 1950s
  - Both industrialization period started in 1970s
- ◆ Differences
  - Korean Government nurturing the industry until prosper
  - Malaysia Government letting the private sector to grow independently



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# Initiatives – The Government

South Korea's Top 10 export items (% share of total exports in bracket)					
Rank	1970	1980	1990	2000	2005
1	Textiles (40.8)	Garments (16.0)	Garments (11.7)	Semiconductors (11.1)	Semiconductors (11.5)
2	Plywood (11.0)	Steel plate-rolled products (5.4)	Semiconductors (7.0)	Computers (8.5)	Automobiles (10.4)
3	Wigs (10.8)	Footwear (5.2)	Footwear (6.6)	Automobiles (7.7)	Wireless telecom equipment (3.7)
4	Iron ores (5.9)	Vessel (3.6)	Video apparatus (5.4)	Petrochemical products (5.3)	Vessels (6.2)
5	Electronic goods (3.5)	Audio apparatus (3.4)	Vessels (4.4)	Vessels (4.9)	Petrochemical products (5.3)
6	Confectionary (2.3)	Man-made filament fabrics (3.4)	Computers (3.3)	Wireless telecom equipment (4.6)	Computers (5.0)
7	Footwear (2.1)	Rubber products (2.9)	Audio apparatus (3.8)	Synthetic resin (2.9)	Synthetic resin (3.6)
8	Tobacco (2.1)	Woods & wood item (2.8)	Steel plate-rolled products (3.8)	Steel plate-rolled products (2.8)	Steel plate-rolled products (3.6)
9	Iron products (1.5)	Video apparatus (2.6)	Man-made filament fabrics (3.6)	Garments (2.7)	Parts of automobiles (3.0)
10	Metal products (1.5)	Semiconductors (2.5)	Automobiles (1.0)	Video apparatus (2.1)	Video apparatus (2.6)

South Korea Top 10 export items (The Star, 2007)



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## Initiatives – The Korean Government

- **The Korean Government realized that shipbuilding is part of the grand scheme to increase the competitiveness and high added value of the Korean industry.**
- **Started with the Korea Shipbuilding Promotion Act in 1967.**
- **Snowballed into huge high technology and labor intensive.**
- **The shipbuilding industry remains as major contribution to the Korean export sector.**
- **It is a fact that during the recession in 1997, Korean shipbuilding remains poised to face the challenges of low currency value. Shipbuilding industry traded mostly in US Dollars. It is even widely said that the shipbuilding “money” even flowed as far as middle of Korea (Daegu)**



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# Initiatives – The Malaysian Government

- **The Malaysian Government also acted on the cue with the Koreans to industrialise the country and complement the Straits of Malacca**
- **Started with the setting up the Malaysia Shipyard and Engineering (MSE) in the 1973**
- **Continued with the various training with the shipyards in Japan or Japanese Technical Institutes**
- **Malaysia Government did try to promote Malaysia as a destination of shipbuilding nation through MIDA or MITI but lost out to other countries considered lower in technology and infrastructure like Vietnam and Philipines.**
- **Hyundai joint venture in Vietnam and Hanjin new sprawling shipyard in Subic Bay showed that we are lacking effort in ensuring Malaysia remain competitive in shipbuilding industry.**



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# Initiatives – The Governments Analysis

- **The similarities ended in the early initiatives by the two governments**
- **The differences between the two Government showed when the Korean Government persevered by setting up the KIST further developed into full-fledged research center KRISO (now housed under KORDI)**
- **And in 1996, the Korean Government decided to combine all 13 agencies under MOMAF – Ministry of Maritime Affairs and Fisheries**
- **Malaysian Government still did not show the interest in developing the industry in totality through sustainable and innovative solutions. Malaysian Government was and is still giving out naval contracts and small government requirements for Marine and APMM and hope the industry to develop by itself.**



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# Initiatives – The Private Sectors Innovation (Research and Development, Engineering)

## ➤ Koreans

- To remain the leader in shipbuilding industry, the Koreans are serious in innovations
- The shipyards are spending a lot of money in design office especially the staff and facilities – SHI is having 1500 designers (from research to detail design)

## ➤ Malaysians

- Malaysians are taking more easier way in running the shipyards where spending on design facilities and designers are not an important factor.
- Malaysians prefer to buy the design from third party from Australia or Singapore or even the designers are agent to overseas designers
- Malaysians shipyards mainly having the design office to cater for the detail drawings or production issues.



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# Initiatives – The Private Sectors Production (Production Efficiency)

## ➤ Koreans

- The Koreans did not invent anything new in shipbuilding production; instead they make it better and faster
- The shipyards in Korea are building the ships in blocks but bigger – instead of blocks they are building mega blocks (almost 2500t to 3000t per block)
- Korean shipyards also prosper from the block building company into shipyards to grab the world market in lower tonnage than the big three – HHI, SHI and DSME

## ➤ Malaysians

- Malaysians on the other hand is using the same technology as before without any major innovation in production of ships
- Even shipyards are reluctant to spend on engineering especially 3-D modelling to improve production efficiency



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## Other Initiatives - Support Industries & Banking and Human Capital

### ➤ Koreans

- The Koreans support industries also extensive in supporting the shipbuilding industry.
- The development is enhanced by the support from the shipyards and banking institutions
- The support industries started with joint venture with foreign companies to cater the early part of shipbuilding in Korea
- Later, progressed into full fledged equipment maker like the engine maker, propeller, HVAC
- The banking institutions also take part in the development of the support industries by providing finance to the support industries
- The human capital in Korea is abundance

### ➤ Malaysians

- Malaysia support industries and the finance are in the back seat where the companies supporting the industry are come and go
- Malaysia also lack of human capital in supporting the shipbuilding industry



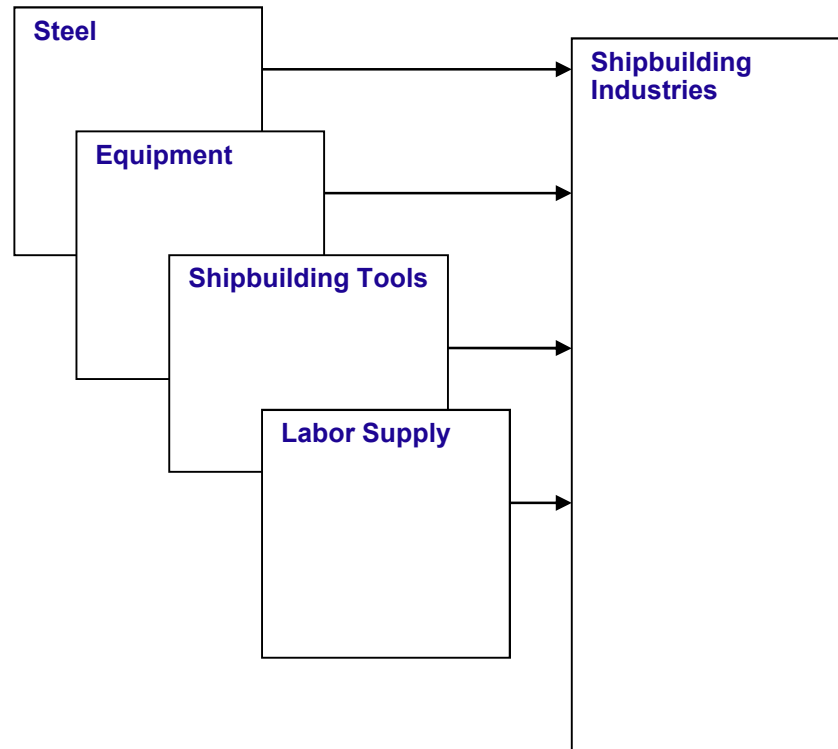
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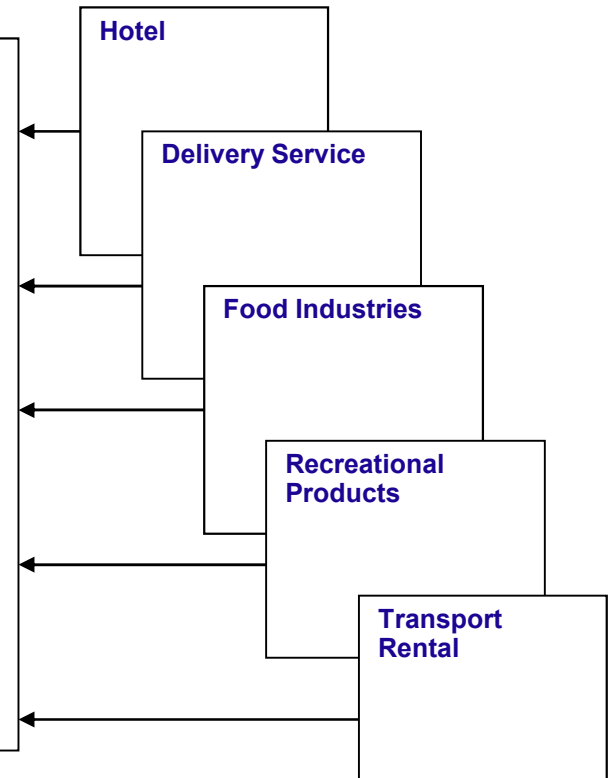


# The Support Industries

## DIRECT SUPPORT



## INDIRECT SUPPORT



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# The Way Forward for Malaysia Shipbuilding Industry

- In terms of orderbook as of March 2010, Malaysia only has 39 vessels (mainly AHTS or Supply Vessels) compared to 23 vessels in 2007, while Korea has 1795 vessels (of mainly complex and high-tech vessels like Ice Class Crude Oil Tanker or LNG Carriers) compared to 419 vessels in 2007.
- The fact is Malaysia still has the competitive edge to compete with Singapore or even Korea to move forward in the industry
- We need to shift the view of compete on the small piece of market in Malaysia into the world market of higher value ships and tanker
- The shipbuilding industry just need to complete the Roadmap Puzzle towards Shipbuilding Nation where Government and Industry are working hand-in-hand.



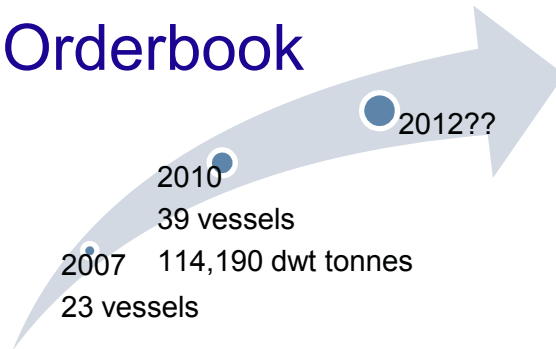
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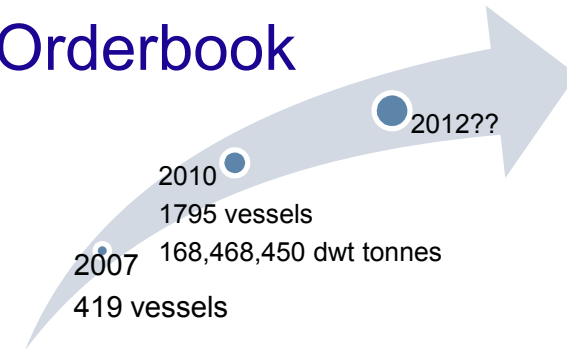


# Output Comparison for 2010 Delivery

## Malaysia Orderbook



## Korea Orderbook



- **Malaysians shipyards are too concentrated on low cost vessels rather than shifting to high-tech or high cost vessels**
- **Just imagine if the tonnage of the number of vessels are bigger than a 10k dwt tanker or 5000HP AHTS, the tonnage of Malaysian shipbuilders would increase and turnover would be higher**
- **Among the Korea 2010 Delivery alone are 6 x LR Product tankers from Malaysian owners that bring out the currency outflow of about USD380m**
- **Just imagine if the fund could be used in Malaysia to build the tankers by Malaysians and it will save us about RM1billion**



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# The Way Forward for Malaysia Shipbuilding Industry



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# The Way Forward for Malaysia Shipbuilding Industry

- **Ministry of Maritime Industries**
  - **Crucial for the development of the shipbuilding industry and maritime industry as a whole**
  - **The ministry will be able to monitor, control funds and promote the development and growth of the maritime industry**
  - **The maritime industry will be more focus in developing the natural resources and taking advantage of the strategic location in the international shipping line.**
- **Malaysia Marine Research Institute (MMRI)**
  - **The next in line is the setting up of the Malaysia Marine Research Institute to provide the pool of indigenous and intellectual property of Malaysian shipbuilding industry**
  - **The research center would be started and funded by the Government to gain expertise and depth in research before privatising the center after making names in the maritime research communities worldwide.**



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# The Way Forward for Malaysia Shipbuilding Industry

- **Promotion of Support Industries**
  - **The support industries is the main pillars of the success in the shipbuilding industries**
  - **Tax breaks and other incentives should be established in order to bring foreign investment in country.**
  - **The targeted industries for the sustainable shipbuilding industry;**
    1. **Ship Designers and Engineering Company**
    2. **Equipment Manufacturer and Automation**
    3. **Technology Supplier**
    4. **Shipbuilding Tools**
- **Promotion of Finance and Human Capital**
  - **The last piece to the puzzle is the liberation of funding to the shipbuilding industry and its related industries and the promotion of human capital to the industry. Malaysian banks need to be exposed to the industry where the returns are higher than other typical industries**
  - **Let many universities offer studies in Marine related majors to fill in the voids in the industry. Let the universities compete to give the best to the students and fill the job market with the proper degree in hand**



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## Final Remarks

- **Malaysia is poised to become a shipbuilding nation because we have the right formula; strategic shipping line, abundance of natural resources and large pool of engineering community.**
- **Malaysia only need to provide the right platform for its to succeed in the shipbuilding industry or even the maritime industry.**
- **Government and Private sectors should work hand-in-hand to provide platform for the future in ensuring the nation aspiration to become a shipbuilding nation is achievable.**
- **Malaysia needs to develop the passion for the maritime industry, and for the sake of the NATION, through sustainable and continuous development in innovation and development of the maritime industry from secondary school to university and later for the industry stakeholders.**



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