

## **CHAPTER 6**

### **CONCLUSION AND RECOMMENDATIONS**

#### **6.1: Summaries on the Malaysian Steel Industry**

##### ***6.1.1 Structure of the Malaysian Steel Industry***

The Malaysian steel industry can be characterized as follows:

- 1) The steel industry was developed with market initiatives, except in the Perwaja case.
- 2) The Malaysian steel production in 1997 amounted 2,962,000 tons. It was ranked 36th in the world. It made up 0.35% of total world production of 794 million tons. Malaysia is not strong enough to compete with international major players.
- 3) However, the Malaysian steel production was the second largest producers in ASEAN countries after Indonesia whose production was 3,816,000 tons in 1997. The Malaysian steel consumption in 1997 was 8,017,000 tons. It was ranked No.1 in the South East Asian market. It means that Malaysia has an opportunity to grow in the South East Asian market.

4) The Production of flat products has not been developed well compared to long products.

#### ***6.1.2: Porter's Five Forces Analysis***

Through 5 forces analysis, it was found out that (1) the Malaysian steel industry was protected by the Government, (2) As the market is being liberalized according to CEPT scheme, rivalry will become more serious, (3) The ASEAN market will be an opportunity to the Malaysian steel producers as the Malaysian mills can expand their capacities not only for the domestic market but also for the ASEAN market.

#### ***6.1.3: Findings from Interview***

Personal interviews were carried out to obtain opinions about the goal and competitive factors of Malaysian steel industry from managers in Malaysian steel industry. The results show that (1) The vision for the Malaysian steel industry should be upstream policy for flat products and (2) the Malaysian steel producers should adopt newer technology boldly to prepare for competition in future.

## **6.2: The Trend of the Steel Industry in Future**

Knowing the trend of the future steel industry will help the Malaysian steel industry to decide a proper vision for itself.

Beddows & Company (1996 ) foresees the steel industry in twenty-five years' time to be driven by three main factors; capital markets, customer markets, and technology changes.

### **6.2.1 Capital Market**

In future, the world capital market will take on more an important role in providing capital funds than individual Government. In the past, the Governments like the Korean and Japanese Governments initiated the investment in the steel industry for the purpose of protecting national interest. However, in future, capital market will influence the investment for steel companies. If a steel company can not show a good returns, it is quite difficult for it to expect the fund from investors. Furthermore, steel companies have to compete with companies in other business sectors in terms of performance to ensure continuous support from investors.

In future, the focus on the mass production for which the building of giant factory is required is no longer important. Other factors must be given due consideration, namely, (1) pay back period of capital (2) size of factories to optimize profits (3) items of steel to win a target market.

### **6.2.2: Customer Market**

Steel companies have been interested in lowering the cost of production. Mass production has been a major feature of steel companies. The steel market in the future is expected to emphasize customer satisfaction. Therefore, steel mills should segment their markets according to the needs of customers and should satisfy customers of their target market. The steel industry is expected to evolve as follows ( Beddows & Company, 1996).

- 1) Traditionally, a company covered all the market. In future, A market will be segmented in details; thus companies focus their products and assets to a certain market segmentation.
- 2) the range of products will be chosen and matched with the capabilities of the corporation concerned.
- 3) the business will be much simplified. It is to focus the assets upon the core tasks for which its strategy and structure are designed.

- 4) the organization will be re-designed to satisfy customers, rather than cost-down by mass production.
- 5) the organization will be a powerful exploiter of Information Technology (IT).  
IT will allow steel companies to do flexible production, receive even a small order, and carry on-time delivery.

### **6.2.3: Technology**

Technological development will transform the fitness of steel industry in 21st century. Until now, economies of scale were important for achieving success. Mass production results in lower production costs, the key to compete. Therefore, steel companies have been competing among themselves with huge production capacity. However, mass production will not longer be important with the introduction of new technology.

### **6.2.4: Recent Technological Development**

- (1) New production technology allows steel companies to adjust the size of their factories according to the target market. For example, integrated blast furnace mills, which are common in Japan, Korea, Taiwan, and USA have been recognized as the best way to produce steel of high quality at a low

price. However, such mills must be operated for 24 hours a day non-stop. The capacity should be large to reap the benefit from economies of scale. Huge investment is needed. Also, they cause serious environmental problems. Newer technology is being developed. For example, mini mills which are smaller in size do not require huge investment and may stop or start their operation according to the fluctuation in demand.

- (2) Development in information technology will allow steel companies to manage the production process with greater flexibility. For example, a company can produce smaller order size as per customers' requirement as material flow, sequencing of order, and delivery time are controlled precisely by information technology.

### **6.3: Recommendations for the Malaysian Steel Industry**

What vision should the Malaysian steel pursue? Should it follow the Korean model, which is similar to the Japan model, or another way?

- 1) As analyzed through five forces and the interviews, and the future trend of the steel industry it is recommended that the Malaysian steel industry pursue an upstream policy.
- 2) However, Malaysia should follow a different strategy from the Korean model for the development of steel industry. As long as Malaysia follows the Korean

model which developed giant factories, Malaysia will not be able to gain competitive advantages in production capacity, compared to world class giant factories. Malaysia will always be a late runner. Malaysia had to adopt another strategy to compete with world class players.

The bold access to new technology is recommended to the Malaysian steel industry. New business environment in coming years will require a different strategy from the traditional one, which is fighting for cost down by mass production.

Continuous access to new technology like thin slab technology is essential for ensuring success. Following the Korean model including Japan and Taiwan would not be beneficial because:

- (1) These countries have pursued economies of scales which require huge investment. Malaysia should consider whether such an investment is appropriate for future market trend and its timing for huge amount is correct or not at this moment.
- (2) Even if Malaysia builds factories of the similar sizes as other foreign major suppliers, it may not be profitable. Mass production is not responsive to customer's requirement of small order. Mass production is aiming for low cost. It cannot take care of small order. The steel market will change. Customers' requirement will be different one another. Excess capacity which is left idle will be waste of valuable resource.

(3) The Korea steel industry, which was successful in the past, also recognizes the importance of newer technology and so invests in adopting newer technology (Park, 1997). Even current successful mills will not be competitive in future anymore if they are lazy at adopting newer technology.

3) As CEPT proceeds, ASEAN market will be opened to ASEAN countries.

Malaysia should be able to use the opening of ASEAN as an opportunity for the growth of its steel industry. Malaysian steel mills will be able to expand their capacity with target of ASEAN market.

4) Investment in Information Technology (IT) .

Physical facilities are the hardware of steel industry while Information Technology (IT) can be its software. The role of IT is becoming more important because;

"Even though facilities are built by new technology, the important thing is the operation skill and know-how. Process control, quality control, sequence of production, and on-time delivery are all information and knowledge intensive which are related to IT."

5) Good management is essential for achieving success. The Malaysian steel industry should endeavor to learn good management skills in order to make their organizations most efficient to response on the environments.



Benchmarking for Japan, Korea, and Taiwan will be one of the ways of learning management skill.

6) The Government role is important for boosting the industry.

Government has been in protecting the Malaysian steel industry by using tariff and non-tariff barriers. It had helped steel companies to grow during the infant stage. However, it may impede the competitiveness of whole steel industry in the long run because the mills become lazy in developing new technology and lowering production costs. Therefore, the Government should be able to go for liberalization scheme as early as possible. When the Government follows its schedule for opening the market, than companies will prepare competing with foreign players and try to find our the solution to strengthen their competitiveness.

The government should encourage companies to invest in R&D for the long run development of the Malaysian steel industry. One of the future directions and plans of action for the steel Industry which Master Plan 2 has identified is effort in R&D; enhancing the capability of existing research institutions for metals.