

## **CHAPTER SIX**

### **CONCLUSION**

#### **6.1 Introduction**

Between 1975 and 1986, MCM did not perform well in its profitability, productivity and cost performance but it showed an improvement between 1987 to 1994. The improvement was achieved due to the effective technology used in the production process and effective internal restructuring of the MCM's organisation.

Chapter one examined the early development and importance of MCM to Sabah's economy. Copper concentrates is one of the major exports of Sabah. The annual production and sales of copper concentrates is approximately 25 per cent of Malaysia's mineral export revenue. The important contribution of MCM to Sabah's economy in terms of exports, is expected to continue until 2000. The MCM's redevelopment plan, which was started in 1990, generates a higher production and export of copper concentrates. In addition to the substantial amount of royalty paid to the state government, MCM has also helped to improve the expansion of local businesses and the livelihood of the people in the region through providing employment opportunities, social amenities and community services.

Chapter Two examined the output trends and productivity of the company. The trends of production at MCM during the mid 1980s were

mainly declines owing to the obsolescence of the machines and equipment, heavy removal of waste, unfavourable ore to waste ratio, inconsistency of the ore's recovery performance, and occasional landslides which prevented access to ore zones. Despite the decline in the production quantity of copper concentrates, the productivities of labour, capital and total factor productivity seemed to show a significant improvement towards the end of the 1987 and early 1990s. Although the trend of labour productivity declined, the capital productivity increased due to the higher quality of capital equipments brought in by the management in 1987. Other factors which contributed to the improvement in productivity performance were the use of better quality blasting accessories, more modern processing technology and a more effective form of organisational structure.

MCM's output production seems to show an increasing returns to scale, that is, the change in the rate of output production increased more than the change in input rate, which means that it is still economical for MCM to expand further its production process. Though MCM incurred additional expenses for the mine's redevelopment plan in 1989 and 1990, the total cost showed a declining trend right from 1980 to 1991. This is attributed to the low rate of royalty payment, less service charge payment to Sabah Kaihatsu Corporation and the discontinuation of the farmers' compensation payment. In contrast, the high total cost in the early 1980s was mainly due to the high payment of royalty to the government, the payment of service charges to

Sabah Kaihatsu Corporation and expenditure on environmental preventive measures and compensation paid to the farmers. Despite the increase in labour cost, the decrease in prices for some major materials, the usage of high quality drilling accessories and the modern technology used in blasting, helped to reduce the production cost. MCM's unit cost also showed a declining trend between 1980 and 1987. However, the additional mine's redevelopment expenses pushed up the average unit cost of production between 1987 to 1991. The average unit cost of production decreased in 1993; the lowest since 1981. Although it increased in 1994, it was lower compared with the unit cost in 1992.

The profit level of MCM significantly improved after 1987 as shown in Chapter four. The improvement in the profit level stems from the increase in productivity, the reduction in total costs and unit costs of production, the favourable prices of copper and gold, and higher sales revenue.

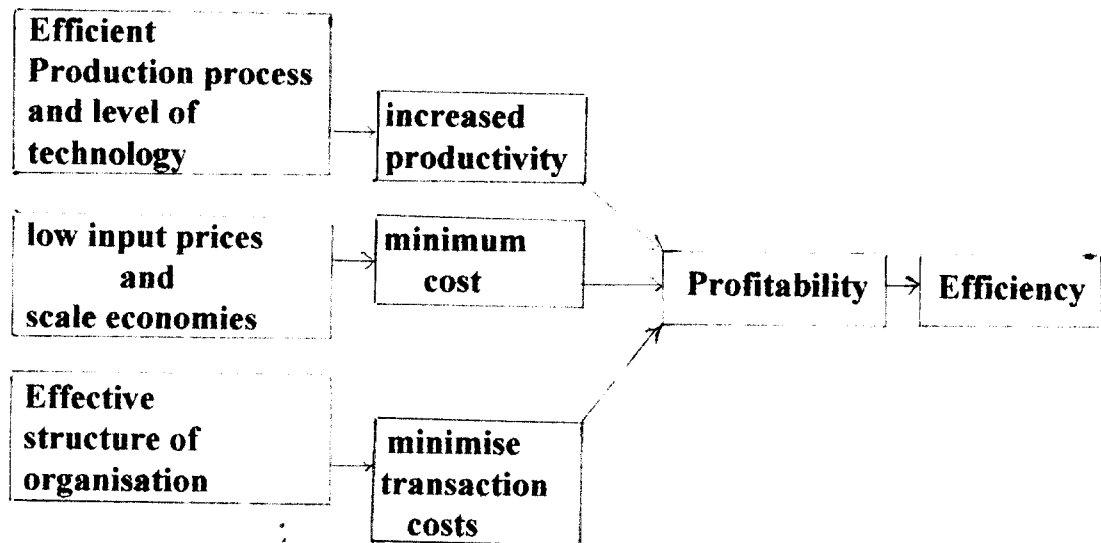
Chapter five discussed the role of the structure of organisation in reducing transaction costs associated with lack of coordination, motivation and cooperation in running the organisation. Transaction costs arose from the ineffective coordination due to the unsystematic flow of authority, and the inappropriate system of incentives and motivational problems which led to shirking of responsibilities by workers in MCM. The situation improved when the present management created a more effective organisational structure by delegating some of the supervisory tasks to two senior managers,

emphasising more on effective coordination and offering conditional rewards which seemed to be effective in motivating workers and thus reducing monitoring costs. The change in the company's structure of organisation helped to reduce transaction costs through changes in the organisational structure, flow of authority, authority relation, cooperation between management and employee, hiring of contractors and system of rewards and incentives.

The general finding of this dissertation suggests that MCM has successfully restructured itself from being an ailing organisation into a productive and quite an efficient one by the end of the 1980s right up to 1990s. The improvement in performance is indicated by the increase in productivity, lowering of costs and the increase in its profit level. Higher productivity is achieved through a well-organised production process and sophisticated technology; cost-efficiency achieved through scale economies and lower cost of factors input; and the company's transaction costs being reduced through structures of organisation that permit better coordination and a system of incentives and motivation (see Figure 6.1).

**Figure 6.1:**

**Flowchart Of Efficiency**



**6.2 Recommendations**

MCM achieved a favourable performance in the late 1980s and early 1990s. This remarkable performance can be maintained if the company can sustain its competitiveness. In order to remain competitive, MCM should formulate strategies and sound policies to cut down further the cost of production. This involves the formulation of a coherent policy to reorganise the company's production process and tightening the cost structure of the organisation. Based on the findings of this research, several suggestions and recommendations are mooted to maintain a sustainable growth performance.

Productivity is important for the growth of the company and, therefore, it should be improved by employing the appropriate technology. The company should upgrade technology in the processing plant to improve copper

recovery performance because this would help to increase the production of copper concentrates. The usage of existing technology must also be maximised if productivity is to be maintained or improved. The company cannot afford to keep any of its sophisticated equipment idle or under utilised.

Labour productivity can be increased by continuous inhouse and intensive training. Taking into consideration the mine's life, which is estimated to last until the end of 2000, inhouse training for workers is more favourable and cheaper than recruiting new skilled workers. However, the management must take into consideration other forms of incentives to motivate workers. One of them could be in the form of conditional financial rewards, that is, by paying higher rate of bonus in accordance to the worker's performance. MCM may recruit new skilled workers to boost labour productivity. There are quite a number of vocational graduates in Sabah but the company must provide attractive incentives to attract them. These incentives may not necessarily be in the form of financial rewards but they could be in the form of better accommodation, housing facilities, sport recreations and other amenities.<sup>7</sup>

The cost of production can be further reduced by increasing automation in the mechanical and production process to mechanise manual tasks or by introducing equipment which permits the use of cheaper materials and energy sources. However, this should only be considered if its benefit can be

---

<sup>7</sup> Company's quarters are limited and many workers are forced to rent accomodation outside.

realised in the short run and if it is relatively inexpensive. Reduction in unit cost of production may also be achieved by diversifying the sources of suppliers for materials. Diversifying the sources of materials enables MCM to obtain competitive prices. Between 1975 to 1986, about 90 per cent of the spare parts and materials were bought from Japan, which was very expensive. MCM should attempt to use more locally-made quality products (materials) such as vehicles spare parts, electrical and other accessories which are relatively cheaper. Other methods of reducing unit costs are by utilising all inputs to the maximum to avoid wastage, and improving production engineering and control.

MCM must also exercise care and adopt an appropriate measure to minimise pollution. However, if too many environmental controls are placed upon the company, it may become difficult to operate at minimum cost. This does not mean that MCM should be lethargic in maintaining appropriate environmental standards.

Profit performance can be maintained by improving productivity and reducing costs. On top of this, MCM may request for more reductions in royalty payment from the state government. The state government reduced the royalty rate in 1987 when the new owner took over the company as part of the rescue package. Currently, the royalty payment is 2.5 per cent of the total sales value obtained from the sale of the net quantity of copper, gold and silver.

MCM can afford to have low volume of production if copper and gold fetch high prices. A low volume of production of copper concentrates requires less machines and materials. This could reduce frequent breakdown of machinery and reduce maintenance costs. A high sales revenue would still be achieved even with a low production if the metal prices are sufficiently high to offset the decrease in the quantity of concentrates produced. In fact, between 1989 and 1991, the quantity of copper concentrates produced was low but the company was still able to obtain a high sales revenue and profit.

### **6.3 Future Prospects**

Although MCM is considered to be relatively large-size for Malaysia, it is moderate-in size by world standards. The ability of the company to survive and remain profitable depends on how successfully it can keep its operating cost levels sufficiently low to accommodate fluctuations of metal prices in the international market. With the financial resources built-up over the past five years, the company may be well-prepared to absorb the effects of the fluctuation in the prices of metals and to caution the impact brought about by unfavourable weather conditions which has quite often affected its operations. The problem of meeting the demand for the copper concentrates does not arise because all its copper concentrates are sold on a long-term sale contract to Sabah Kaihatsu Corporation in Japan. However, if the world



demand for copper, gold and silver falls, which in turn causes the price of these metals to go down, this would obviously affect the company's liability.

Since the price of copper, gold and silver is beyond the company's control, MCM must increase its effort to produce copper concentrates on a low-cost competitive basis. Currently, the management is in the process of downsizing its manpower and reducing other expenses, including reducing the number of chartered vehicles to accommodate the fluctuation of copper price. In June 1994, MCM retrenched twenty officers including senior officers, to cut down its cost. Copper prices are not expected to fall during the middle of 1990s (Chadwick, 1993). Between January 1995 to March 1995, the price of copper fetched in the range of USD 1.30 and 1.40 per pound, the highest since 1981. This is due to high demand for copper in the world market. This situation may continue because recent political events throughout the world in countries such as the the newly democratic East European region and China, could cause an increase in the demand for copper, gold and silver and this may push up prices further in the 1990s. The expanding economy and the rapid pace of manufacturing in China will lead to an increase in copper usage. The copper mines in China will not be able to supply the increased demand for copper and more imports would be needed to meet their demand (Chadwick 1993). Taking the current global economic scenario, it is foreseeable that MCM would be able to sustain its current competitiveness and growth.