FEASIBILITY STUDY ON THE ESTABLISHMENT OF
A STEEL FABRICATION FACTORY IN SOUTHERN PART OF CHINA

by

CHEUNG HIM-WAH (張謙華)
TAM SUI-LEUNG (譚穗良)

MBA PROJECT REPORT
Presented to
The Graduate School

In Partial Fulfilment
of the Requirements for the Degree of
MASTER OF BUSINESS ADMINISTRATION

THREE-YEAR MBA PROGRAMME
THE CHINESE UNIVERSITY OF HONG KONG
May 1991

Professor K C Mun
Advisor
A STUDY OF THE ECONOMIC FEASIBILITY OF ESTABLISHING A STEEL FABRICATION FACTORY IN SOUTHERN CHINA

321087

Thesis
HD
9526
C62C43

05 MAR 1992

THE DISSERTATION

IN PARTIAL FULFILLMENT

OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE

IN MECHANICAL ENGINEERING

THE UNIVERSITY OF HONG KONG

May 1992

J. S. LAM
SUMMARY

With the escalating production cost in Hong Kong in the recent years, many companies, especially the light industries have shifted their manufacturing base from Hong Kong to China.

In this report, we are going to study the feasibility of establishing a heavy steel fabrication factory in the southern part of China for an engineering company in Hong Kong. The feasibility study encompasses the demand forecast for the products to be manufactured, factory location selection, cost comparisons, investment form selection and cash flow analysis. The selection criterion that we adopt is 'cost minimization' and objective assessment techniques like personal interviews and questionnaires are also being employed in our study.

Result of the study shown that Zhuhai is the most appropriate place for establishing the factory with the considerations of operation and management costs. On the other hand, the preferred form of investment will be equity joint venture for this particular project. From the study, it also reveals the fact that this investment project is a profitable one for the company and it may also offer some intangible benefits to the company in penetrating into the China market and increase its competitiveness of the company in striving for its continuous growth and prosperity.
## CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUMMARY</td>
<td>ii</td>
</tr>
<tr>
<td>CONTENTS</td>
<td>iii</td>
</tr>
<tr>
<td>1 INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Economic Situation of Hong Kong</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Economic Situation of China</td>
<td>2</td>
</tr>
<tr>
<td>1.3 The Feasibility Study</td>
<td>3</td>
</tr>
<tr>
<td>1.4 Supporting Arguments</td>
<td>4</td>
</tr>
<tr>
<td>2 METHODOLOGY</td>
<td>7</td>
</tr>
<tr>
<td>2.1 Market Demand Analysis</td>
<td>7</td>
</tr>
<tr>
<td>2.2 Location Selection Analysis - Part I</td>
<td>7</td>
</tr>
<tr>
<td>2.3 Location Selection Analysis - Part II</td>
<td>8</td>
</tr>
<tr>
<td>2.4 Form of Investment Analysis</td>
<td>8</td>
</tr>
<tr>
<td>2.5 Cash Flow Analysis</td>
<td>9</td>
</tr>
<tr>
<td>2.6 Flow Chart</td>
<td>9</td>
</tr>
<tr>
<td>3 MARKET DEMAND ANALYSIS</td>
<td>10</td>
</tr>
<tr>
<td>3.1 Types of Product</td>
<td>10</td>
</tr>
<tr>
<td>3.2 Forecasting Methodologies</td>
<td>11</td>
</tr>
<tr>
<td>3.3 Demand Forecasting</td>
<td>12</td>
</tr>
<tr>
<td>4 PRELIMINARY SELECTION OF LOCATION</td>
<td>18</td>
</tr>
<tr>
<td>4.1 Background</td>
<td>18</td>
</tr>
<tr>
<td>4.2 Shenzhen Special Economic Zone</td>
<td>19</td>
</tr>
<tr>
<td>4.3 Huichow</td>
<td>21</td>
</tr>
<tr>
<td>4.4 Shantou Special Economic Zone</td>
<td>23</td>
</tr>
<tr>
<td>4.5 Guangzhou - Guangzhou Economic &amp; Technology Developing Zone</td>
<td>24</td>
</tr>
<tr>
<td>4.6 Hainan Special Economic Zone</td>
<td>26</td>
</tr>
<tr>
<td>4.7 Zhuhai - The West Economic Developing District</td>
<td>28</td>
</tr>
<tr>
<td>4.8 First-round Conclusion</td>
<td>30</td>
</tr>
<tr>
<td>5 FORMS OF INVESTMENT</td>
<td>33</td>
</tr>
<tr>
<td>5.1 Background</td>
<td>33</td>
</tr>
<tr>
<td>5.2 Compensation Trade</td>
<td>33</td>
</tr>
<tr>
<td>5.3 Joint Exploration and Exploitation</td>
<td>35</td>
</tr>
<tr>
<td>5.4 Equity Joint Venture</td>
<td>35</td>
</tr>
<tr>
<td>5.5 Contractual Joint Venture</td>
<td>37</td>
</tr>
<tr>
<td>5.6 Wholly Foreign Owned Enterprise</td>
<td>38</td>
</tr>
<tr>
<td>5.7 Comparisons of the Three Forms of Investment</td>
<td>39</td>
</tr>
<tr>
<td>5.8 Final Selection of Investment Form</td>
<td>41</td>
</tr>
</tbody>
</table>
## CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>COST ANALYSIS AND CASH FLOW ANALYSIS</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>6.1 Introduction of Cost Analysis</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>6.2 Cash Flow Analysis</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>6.3 Net Present Value Analysis</td>
<td>53</td>
</tr>
<tr>
<td>7</td>
<td>CONCLUSION</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>APPENDIX I</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td>APPENDIX II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPENDIX III</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPENDIX IV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td></td>
<td>62</td>
</tr>
</tbody>
</table>
1.1) Economic Situation of Hong Kong

With the rapid increasing of labour cost and land cost together with the severe competitions from South Korea, Taiwan, Singapore, some of the entrepreneurs in Hong Kong had already moved their operations into the nearby countries like China and Thailand. The major reason behind this move is in taking the advantages of low labour and land costs. However, so far, the above-mentioned movements are mostly related to light industries like garment, electronic products and toys.

As far as heavy industries like steel fabrication, transport equipment or machinery building are concerned, we still cannot see any obvious movements\(^1\). One possible reason for this phenomenon will be the quality of labour. Because, for these industries, the requirement for the labour skill is usually very high, but the skill of the labour in the Asian developing countries are still rather low at the moment, so it seems to be the biggest obstacle for such movements.
1.2) Economic Situation of China

Since China implemented its 'open-door' policy in 1978, because the rent, land and labour cost was only about one quarter of Hong Kong, many Hong Kong entrepreneurs, as a result, have shifted their labour-intensive production lines northward. In the delta area of the Pearl River alone, the investment from Hong Kong is more than HK$60 billion\[2\] and the total number of people being employed is close to two million. However, after the June 4th event in 1989, people started to suspect about the investment environment in China, in fact, some companies have suspended their investment plans and some have even cancelled their development plans in China. This, together with the economic sanctions being imposed by the western countries, really cause great hesitations to the foreign investors in deciding the development plans in China.\[5\][7][8]

Nevertheless, the investment situation now in China seems to become better than when immediately after June 4th. Japan and the EEC countries have already started to trade again with China, the Asian Development Bank and the World Bank are now both willing to furnish loans to China for development.
1.2) On top of that, the senior officials of China have again and again pointed out that the 'open-door' policy will still be going on. This, undoubtedly will help to rebuild part of the overseas investors' confidence about the future investments in China.

1.3) The Feasibility Study

The feasibility study that we are going to carry out is for an engineering company which is major in steel fabrication and manufacture of transport equipment to decide whether it should move one of its existing factories to southern China, and if so, where should it be located and what sort of operation will be the most advantageous.

The company under study is jointly owned by Jardine & Matheson Group and Cathay Pacific Airways. It currently employs about 700 number of employees, of which about 2/3 of the employees are workers and the balance are office staff. The company at present has three workshops located in Kowloon, Sai Kung and Fanling. The company's current business operations include design, fabrication and installation of structural steelwork, space frames, mechanical handling equipment, airport ground supporting equipment, aircraft maintenance equipment,
1.3) Environmental engineering equipment and boundary security equipment. Right now, it starts to make an analysis to replace it with a factory of large scale in China. The company is going to close down the factory in Fanling which is under a tenant-lease contract. This factory consists of a one level covered workshop of floor area equal to 2,000 m² and open space of 4,000 m². The major work being handled there are the fabrication and surface treatment of heavy structural steel.

1.4) Supporting Arguments

Traditionally, with the usual characteristics of high initial capital investment and long pay-back period associated with heavy industries, it is very seldom that investors will choose to invest in a communist country, such as China. Despite the above argument and other counter arguments such as low productivity, we believe that there are several unique advantages for the company concerned to invest in China.

a) After 1997, Hong Kong will become part of China, it is not worthwhile to pay such a high premium for using the land in Hong Kong for only a few years. For low profit margin business like steel fabrication, this high cost will not be justified.
1.4) b) It is logical to believe that land cost in China after 1997 especially in the Pearl River Delta will increase rapidly and so it is better to have it at a lower price now than to have it later at a much higher price.

c) The cost of labour is only 1/8 that of Hong Kong.

d) As part of the company's business is related with airports and transport equipment, with the present development plans of China, the company can certainly enjoy some of the benefits like being close to the customers, more competitive and flexible in pricing.

e) Major portion of the products being manufactured in this proposed factory will be for export to Hong Kong and the Asian Pacific countries. In addition, certain portion of the work may be classified as high technology products, therefore, in terms of tax or other financial issues, the company may enjoy a certain amount of credits.

Finally, to arrive at a conclusion of whether we should invest in building a factory in southern China, we will base on the objective assessment of
1.4) the pros and cons of the proposed investment in different aspects. Here we need to add that we will concentrate our study on various locations in the southern part of China instead of different part of China, as we lay stress on the proximity of those locations to Hong Kong and as they are the most favoured locations of foreign investors, there should be many favourable reasons for investment. In Chapter 2, we will outline our methodology of this feasibility study, then, basing on the findings of the feasibility study, a final report will be submitted to the top management for final approval and implementation.
CHAPTER 2

METHODOLOGY

2.1) Market Demand Analysis

In our study of the possibility of making an investment in China, we firstly analyze the market situation about the needs of the company's products (including Hong Kong, Macau, South East Asian countries and China). Forecast on the future demand is made basing on the qualitative analysis.

2.2) Location Selection Analysis - Part I

In the process of selecting a most suitable location for the company's investment, we will first identify as candidates several points, which should be having something special and favourable for foreign investment and existingly having certain number of foreign investors. At the same time, we will have a look at the general environment and the infrastructures of the various possible locations and basing on the criteria of reducing the maximum cost, we will screen out those less attractive and retain the best two for further investigation. In the
2.2) preliminary screening process, only the 'hard' factors of the investment environment will be considered with the assumption that the 'soft' factors of the investment environment of various locations are by and large similar.

2.3) Location Selection Analysis — Part II

In the ultimate location selection decision, we try to know more about the two points we selected from the preliminary screening process by going into them and understanding the environment. Questionnaires will be sent to some factories manufacturing similar products. Interviews with some of the foreign investors and officials will also be conducted to improve our understanding of the environment. Per-unit cost and profit comparison among Hong Kong and the two candidates will be made.

2.4) Form of Investment Analysis

In the study of the most suitable form of investment — three types of investment enterprises or processing trade, we will collect information about the governing laws and the privileges given to various types of investment enterprises. Advantages and disadvantages of various types of investment will be examined after interviews being made.
2.5) Cash Flow Analyses

After the final choice of investment location and form, an estimation computation of revenue and cost there into the investment plan will be made. If the NPV and IRR are up to the expectation of the company, the location is finally determined and the investment plan will be put into action.

2.6) Flow Chart

The following flow chart summarizes what we are going to do in the feasibility study and the method we shall adopt in the study.

Flow Chart of the Feasibility Study

```
Market Demand Analysis
- Forecasts Based On Qualitative Analysis

Investment Environment Analysis (I)
- A Comparison of Hard Environment

Investment Environment Analysis (II)
- Per-unit Cost and Profit Estimation Comparison
- Questionnaires and Interviews

Cash Flow Analysis
- NPV, IRR Calculation

Form of Investment Analysis
- Qualitative Analysis
- Interview

Conclusion
```
CHAPTER 3

MARKET DEMAND ANALYSIS

3.1) Types of Product

As mentioned earlier, the present scope of work for the company includes automobile engineering, design, fabrication and installation of structural steelwork, space frame, airport ground supporting equipment, aircraft maintenance equipment, air cargo and passenger baggage handling systems, solid waste handling systems, mechanical handling equipment, erection of industrial plants and trading of industrial products.

With regard to products that need to use production facilities inside the workshop, the following product lines can be neglected in the analysis because they will not take up any space in this new proposed workshop.

- Automobile engineering
- Erection of industrial plants
- Trading of industrial products
3.2) **Forecasting Methodologies**

Basically, there are four types of techniques available for forecasting demand\[11\]. They are:

a) Qualitative analysis  
b) Time-series analysis and projection  
c) Econometric methods  
d) Input-output analysis

In general, it is difficult to state that one of these forecasting approaches is superior to the others. The best one for a particular task depends on the specific forecasting problem. Typically, the greater the level of sophistication, the higher is the cost.

In the present problem, qualitative analysis will be used because the other three techniques are not applicable in this situation. Time-series methods are based on the assumption that future events will follow an established path or, alternatively, that past patterns of economic behavior prevail sufficiently to justify using historical data to predict the future. However, in the existing problem, there is no past pattern for reference and so it is not applicable.
3.2) Econometric methods of forecasting require the user to make explicit assumptions about the linkages among the variables in the system being examined. For project based industry like the company concerned, even though it may be possible to indicate a causal relationship between some of the variables and the demand, there is no explicit relationship regarding the magnitude of change.

Input-output analysis traces the intricate chain reaction through all industrial sectors and measures the effects, both direct and indirect, on the output of each of the affected industries. In Hong Kong, we do not have such data and so it is again not applicable.

The method adopted in the qualitative analysis for this project is by conducting surveys. The surveys include gathering information from the government statistics and reports, trade magazines, newspaper and related publications. The above mentioned product lines will be analyzed one by one later.

3.3) Demand Forecasting

The company currently supply solid waste
3.3) handling equipment like refuse chutes, compactors, trailers, refuse containers and equipment for transfer station projects. The demand for these products depends on the number of new high rise buildings being built and the amount of refuse generated per year and the government expenditure on solid waste handling. According to the 'Waste Disposal Plan for Hong Kong' prepared by the Environment Protection Department of the Hong Kong Government[12], Hong Kong's waste arisings currently amount to nearly 22,500 tonnes per day in 1989 and based on past trends and future projections, it is anticipated that daily waste arisings in Hong Kong will continue to increase such that by the year 2001, they will amount to approximately 30,000 tonnes per day which represent about a growth rate of 2.4% per year. In addition, according to this report, there will be another seven refuse transfer stations being built from 1991 to 2001 which will be roughly about one station per year and our estimated sales revenue from that is about HK$15 million per station. Moreover with reference to the statistics from Hong Kong Government[1] and the trade magazines, the number of flats or units with consent to commence work has been stagnated between the range of 54,000 - 70,000 units and this figure is supposed to be valid until year 2000. From these figures, the
growth of the business turnover for that particular product line for the Hong Kong market will be about 5-10% per annum.

Airport equipment is one of the core businesses for the company. Besides the HK$127 billion airport project at Chek Lap Kok, new Macau airport and Shenzhen airport are just a few examples in the nearby territories. Further to that, the Eighth Five Year Plan for China has stressed the importance of upgrading the airport equipment in China. The plans include Capital Airport Extension Project (RMB 1 billion), Shanghai airport (RMB 100 million), Wuhan airport (RMB 340 million), Kunming airport (RMB 140 million), Lhasa airport (RMB 268 million), Xian airport (RMB 351 millions), in addition to these projects, there are six other airport projects being carried forward from the Seventh Five Year Plan. Besides that, there will be four new airport projects under evaluation in the coming five years. Therefore, we can see that the potential of the airport equipment is really optimistic.

As far as structural steelwork, space frame construction and mechanical handling equipment are concerned, they are largely depending on the development of the infrastructures and investment
in production facilities. With the large capital expenditure that the Hong Kong Government is going to spend in the next 7-10 years for the airport and sea port development project, it is likely that the supporting industries like the structural steelwork and mechanical handling equipment will also have definite advantages. Especially starting from 1993 onwards, when the civil works are being carried out, the demand will definitely be booming.

Apart from Hong Kong and China, Macau has achieved a double-digit increase in GNP in the last two years and there were many large investments being made by overseas and local entrepreneurs. According to our personal interview with the director of Finance Department in Macau, Mr E Lemos, the growth in GNP is expected to be about 10% per annum for the next 5 years. Besides that, the company is also actively seeking the export of the company's products to the Asian Pacific countries. According to our preliminary survey (trade information from the Hong Kong Trade Development Council and interviews with the senior staff from companies in those countries), the key determinants for securing the market are competitive prices with reasonably good quality. For details, please refer to Appendix (I). Therefore, if the production costs can really be reduced by
3.3) opening a new factory in China, then it is likely the company's products can also be sold in those countries.

In view of the above qualitative analyses, we can see that, just Hong Kong alone, the demand for the company's products is existing and in fact increasing. This, together with the booming market in China and Macau, makes it even better off. Finally, if the quality and price are both competitive, the demand will even further increase and we forecast that with the above future demands, the annual sales will grow at about 10% per annum in the next 10 years, whilst the growth in production volume will grow at about 14% per annum, because of the possible competition from domestic suppliers which may drive the profit margin down. So there is a difference in the growth of sales and production. The 10% growth of sales per annum is derived from the increase in sales of airport equipment in China and the increase in sales revenue derived from the Macau market in the next 5 years. This also assume that the sales volume derived from the Hong Kong market will maintain at the level of year 1990 for the next 5 years. For the remaining 5 years, we trust that the Asian countries market will grow at about 5% per annum, this together with the commencement of the
3.3) construction stage for the new airport and port
development project and the infrastructure projects,
the growth in the Hong Kong market will amount to
about 5% per annum.
CHAPTER 4

PRELIMINARY SELECTION OF LOCATION

4.1) Background

Due to its close proximity to Hong Kong, its comparatively political stability among South East Asian countries, its same language used with Hong Kong, as well as its invariable belief in continuing the open-door policy, we have decided that South Eastern China is more appropriate for our investment. So, our attention will be focused on the choice among several cities or economic zones in China which we believe are the better location for foreign investors.

Firstly, we will take a look at the general environment and the infrastructures of each arbitrarily chosen points, and then basing on the criteria of reducing the maximum cost, we will screen out those less attractive. In this preliminary screening process, our attention will be on the difference of the 'hard' environment, while both hard and soft environment will be attended to when two remaining candidates are later made comparison of.
4.1) There are six places we have selected to make comparison, they are Shenzhen, Huichow, Shantou, Guangzhou, Zhuhai and Hainan (For the geographic locations, see Appendix II). As they are either special economic zone, or coastal city, or newly set-up developing zones, we do not see any big difference in their economic preferential schemes for foreign investors, so we are going to look at them in three aspects: the general environment, installations and traffic.

4.2) Shenzhen Special Economic Zone

4.2.1) General Environment

The Shenzhen Special Economic Zone (SEZ) was set up as early as 1979 and has an area of 327.5 km² and a population of more than a million. It locates at south eastern part of Guangzhou, and is the closest to Hong Kong among those coastal cities. Various industrial districts or science and technology centres were developed in the districts of Shekou, Shanghu, Baguoling, Huajiao Town, Nantau, Futian and Shatonjiao. There are several other towns nearby the SEZ also attracts quite a lot of foreign investors for their vicinity to the SEZ and Hong Kong.
4.2.2) **Installations**

Shenzhen SEZ is equipped with advanced communication and media link. Yet the higher charges and the shortage of power render threats to the investors. So, concentrating efforts in the construction of the region's power, water supplies and telecommunications are important for its further development. The planned construction of facilities including more intra-city telephone services, Shenzhen-Canton optic cable, pager system of Zhujiang Delta and small-coaxial cable telephone facilities is now also speeded up so as to reduce the aggravated problems caused by increasing use of telecommunication facilities.

4.2.3) **Traffic**

Shenzhen SEZ has developed an extensive transportation network. Guangzhou-Kowloon Railway and Guangzhou-Shenzhen Railway have long been opened to traffic. Various berths capable of handling vessels under 25,000 tons has been built. Zhuhai-Shenzhen-Hong Kong highway is underway and a nearby airport at Huangtian is now under construction. Yet with the expansion in population as well as the increase in the number of foreign
4.2.3) investors, heavy traffic makes the present transportation facilities incapable to meet the need.

Therefore, the construction of Shenzhen Airport, Yautain Harbour, Mana Harbour, Shenguang Highway and so on are to speed up.

4.3) Huichow

4.3.1) General Environment

Huichow is a newly favoured location for foreign investors, which situates very closely to Shenzhen, but a bit far away from Hong Kong. It has an area of 11,200 km², the size of which is incomparable by Hong Kong and Shenzhen. The population there is about 2 million. As its emerging as a more popular place of investment is recent, many of the supporting facilities are still under construction.

4.3.2) Installations

Huichow city now stresses the construction of infra-structures to lead the development of the region and economy. These include the supply of
4.3.2) electricity and water. In Daim Au region, there is a 110,000 kw electricity supply station. Another two factories for 220,000 and 110,000 kw respectively are under construction. In telecommunication, telephone system in Huichow has improved quite a lot, and there will be further 50,000 more programmable exchanges set up in the future. Also land supply will be increased as it is now levelling a hill and connecting an island is at work in Autou.

4.3.3) Traffic

For the sea traffic, since Huichow has a good gulf with 8 to 10 meters deepness that 100 to 200 berths for above 10,000 dwt vessels can be berthed, it helps solve the traffic problem faced on land. Despite this, Huichow is now stressing the need for improving the roads and highways nearby Dongjiang and Saizhijiang. Moreover, the Guang-shen-shan railway will have Huichow as one of the major stations. The construction of the highway from Shenzhen to Huichow is also under close supervision.
4.4.1) General Environment

Since 1981, the Shantou SEZ has been developed into a comprehensive economic region with industry as the mainpost. It locates in the east and south suburb of the Shantou city and covers a small area of only 52.6 km². It can be divided into two subzones: Longhu and Guangao. There is an abundance of labour force because of the dense population of the whole Shantou city. Hence, there is little problem for foreign investors to hire labour to their factories in the SEZ.

4.4.2) Installations

The Shantou network now supplies power at an installed capacity of over 450,000 KW. For telecommunication, Shantou is equipped with all kinds of modern telecommunication facilities such as telex and fax networks and a microwave communication system as well as a telephone exchange system at an installed capacity of 19,000 ports. Road, water, power supply and telecommunication are sufficient for the developed area. Also other facilities such as hotel, recreational grounds, shopping arcade, clinics and so on have been built for catering investors' basic needs.
4.4.3) Traffic

Now there is a cargo wharf composed of 3 berths for vessels up to 5,000 dwt and 2 berths for those up to 3,000 dwt in the Shantou port. Since it is only a shallow port, a deep-water wharf is badly needed. Luckily right now, Shantou port is under reconstruction so that the wharf can be built for heavier vessels to anchor.

The Shantou airport with its various home and overseas flights makes it a convenient place despite its distance from Hong Kong. In addition, there is an express way connecting Shantou and Shenzhen which help shorten the distance between Hong Kong and Shantou. But still, the more lengthy time required for transportation is a question.

4.5) Guangzhou - Guangzhou Economic & Technology Developing Zone [15] [17]

4.5.1) General Environment

The Guangzhou Economic & Technology Developing Zone, which is 88 nautical miles from Hong Kong, situates in the east of Huangpu district, east suburb of Guangzhou. It lies at the crossing of the principal channel of the Pearl River and the north main channel of Dongjiang River. It has
4.5.1) an area of 58 km$^2$ and is going to be built as a modernized, research and production combined, new industrial zone by the way of absorbing foreign capital, introducing advanced technology, advanced management experience and training for qualified person. It begins to develop in 1984 and has attracted a lot of foreign investors.

4.5.2) **Installations**

At present, the developing zone has a certain foundation of utility already. Both water and power supplies are enough for use. For it is enclosed by various rivers, high volume of water is available for power generation. There is a Huangpu Power Plant with a designed capacity of 500,000 kw, and it is going to expand to 1.1 million kw to meet the needs of the first stage development of the zone.

4.5.3) **Traffic**

Although the developing zone is newly established, Guangzhou has been a big city long in history. So the communication condition is also fair in the development zone. The Guangzhou-Shenzhen highway runs through the zone at Dashadi, which links the
4.5.3) urban area by Zhongshan highway and Huangpu Avenue. In the north of the developing zone, there runs Guangzhou-Shenzhen railway, while in the east of the zone, there lies the biggest sea port in South China – the Huangpu port, which has the handling capacity of 16 million MT per year. The Huangpu new port in the developing zone has 8 berths which can berth ships of 20,000 dwt. There exists various container quays help to meet the containerized shipments. Now the new port is going to be further enlarged so as to handle larger volume of cargo due to further development in the future.

4.6) Hainan (SEZ)\[^{17}\]

4.6.1) General Environment

Hainan is China's second largest island and has an area of 34,000 km\(^2\). It is rich in natural resources and agricultural products, and attracts tourists. The population in Hainan now is more than 6.2 million. It locates at the south-most of China. Since its inclusion into a province and special economic zone in 1988, the development of Hainan in every aspect has been speeded up. People living there have their living standard raised due to the economic reform and openness.
4.6.2) **Installations**

In communication facilities, now most of the island has telecommunicated in microwave. In electricity and water supply, there has been a large plan for development of a power supply plant which supplies up to 1.3 million kw in 1995. In these few years, several power stations as well as water supply engineering projects will begin to produce consecutively.

4.6.3) **Traffic**

With three main roads connecting various cities and countries in Hainan, they are not large enough to accommodate the heavy traffic brought forth by the economic construction, but now there is a superhighway built to solve the problem. As Hainan is an island, there are a lot of gulfs along the coastal line. Out of the 68 ports, there are more than 16 ports built for business use. Now there is harbour in Xishuibu which has berths capable of accommodating vessels up to 20,000 dwt. In addition, there are two airports in Hainan that have regular routes to Hong Kong.
4.7) Zhuhai - the West Economic Developing District

Because of the central policy of enforcing the construction of basic industry, raw material industry, transportation and energy, the government of Zhuhai decided to extend westward and stress on the development work of the west district at the end of 1989. The development of the west district is a strategic step protecting the long-term economic prosperity of Zhuhai and the whole South China. For investors, this district provides favourable conditions, as there are several degrees for economic development in the west district, which may enjoy different preferential policies and treatments including those of SEZ's, Chinese coastal open cities' and those of economic open area in the Pearl River Delta.

4.7.1 General Environment

Lying in the immediate west of Zhuhai special economic zone, which is comparable to Shenzhen in economic development, the west district's programming area includes 3 towns (Sanzao, Nanshui and Xiaolin), 3 farms, one village and 4 pieces of cultivation. The total area is 577.4 km² and the population of the district is 80,000. However, the supply of labour is sufficient, for there is
4.7.1) a large population clustering around the Delta River areas. It is just 45 nautical miles from Hong Kong and 11 nautical miles from Macau.

4.7.2) Installations

There are a series of large programmes under construction at present. A seashore modern city and a picturesque golden beach will be built for increasing its attractiveness in providing a sound environment for foreign investors, a 1.2 million kW thermal power station will be built. The telecommunication building begun in Sanzao is to put in use 500 program-controlled telephones, and even more number of telephones in the future. The Pingang water supply project will be able to solve the water supply problem for the west district, the east district and even Hong Kong.

4.7.3) Traffic

The west district stress developing a deep-water harbour which covers 82 km² water face, with handling capacity of 38 million tons a year and being able to berth ships of 100,000 dwt at Gaolan Island, where a railway through Jiangmen, Fushan to Guangzhou is built. To link up the Zhuhai city and Gaolan port, a 54 km express way is constructed.
4.7.3) The given up Sarzao Airport has already been repaired and it is going to be enlarged into a large-sized civil aviation airport to meet the projected heavy traffic in the future.

4.8) First-round Conclusion

Since cost effectiveness is our prime concern in our investment inside China, we first will rule out the Hainan SEZ although it has its investment environment improved quite a lot in these two years, since transportation cost will be very high for import and export of materials, equipment, and finished goods. In addition, very high opportunity cost will incur for our management to run a factory too far away from Hong Kong, because our managerial resources can be put into a more productive way than in travelling between the two working places.

Shantou is the second farthest from Hong Kong among the candidates chosen by us. The transportation problem is far less important than the Hainan Island as it is also in Hong Kong's nearby Guangdong Province. Yet the scarcity of land for development is a problem. Therefore, it is also ruled out as the selected.
4.8) Huichow, though nearer to Hong Kong than Huinan and Shantou, is only a newly developing area. Infra-structures there are still far lagging behind from that of the SEZs, while it is not situated nearby one of them. For this, Huichow is not considered.

Guangzhou Economic and Technology Developing zone is quite close to west district of Zhuhai in two aspects. They are both newly developing zones and they are both having large developed cities, that is, Guangzhou Municipality and Zhuhai Municipality as the backlog. The distance of the two zones from Hong Kong is nearly the same. Yet the former one is less attractive in that it has less land for development than west district.

In addition, sea transportation in Guangzhou is less convenient, for the depth of the harbours is not comparable with that of Zhuhai. Henceforth, the west district of Zhuhai is more preferred than Guangzhou.

As a result, Shenzhen, which is the closest Chinese region to Hong Kong, and which is the most developed amongst the SEZs and coastal economic region, and west district of Zhuhai, which is the
4.8) extension of the Zhuhai SEZ and which enjoys even more favourable conditions for further development, are selected preliminarily for further analysis, more detailed comparison of the investment environment between these two locations will be made later after our description of the choice among various forms of investment.

To summarize the location analysis above, a table showing the comparative analysis of the six possible locations for the new steel factory is prepared as below for reference. From this table, we have adopted the two favourable locations, namely, Zhuhai and Shenzhen for further analysis.
### TABLE 1

A COMPARATIVE ANALYSIS OF THE POSSIBLE LOCATIONS FOR A STEEL FABRICATION FACTORY IN SOUTH CHINA

<table>
<thead>
<tr>
<th>Location</th>
<th>Environment Condition</th>
<th>General Environment</th>
<th>Installation</th>
<th>Traffic</th>
<th>Overall Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shenzhen</td>
<td>Favourable</td>
<td>Favourable</td>
<td>Very Favourable</td>
<td>Favourable</td>
<td></td>
</tr>
<tr>
<td>Huichow</td>
<td>Fair</td>
<td>Unfavourable</td>
<td>Fair</td>
<td>Unfavourable</td>
<td>Unfavourable</td>
</tr>
<tr>
<td>Shantou</td>
<td>Fair</td>
<td>Favourable</td>
<td>Unfavourable</td>
<td>Fair</td>
<td>Fair</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
</tr>
<tr>
<td>Hainan</td>
<td>Fair</td>
<td>Unfavourable</td>
<td>Unfavourable</td>
<td>Unfavourable</td>
<td>Unfavourable</td>
</tr>
<tr>
<td>Zhuhai</td>
<td>Favourable</td>
<td>Favourable</td>
<td>Very Favourable</td>
<td>Favourable</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 5

FORMS OF INVESTMENT

5.1) Background

Compensation trade, equity joint venture, contractual joint venture, joint exploration and exploitation and wholly foreign owned enterprise are now possible for foreigners to participate in China. These five modes of activities are the common forms of foreign investment in China. Chinese in Hong Kong, Macau and overseas enjoy the same status as foreigners when taking part in these businesses.

5.2) Compensation Trade

In the strictest sense, compensation trade is a form of international trade based on credit. Payment is in kind not by foreign exchange. Foreign partners often provide production equipment or patented technology to the Chinese for the latter's production purposes.

Compensations to foreign partners for their outlays
5.2) and interests can be made in two ways: by direct or indirect product. Compensation by direct product involves payment to foreign partners of products manufactured by the imported equipment or technology. In case the products produced with the equipment provided by the foreign partners are not dealt in or the equipment provided does not produce tangible products, compensation can be made by indirect products of the same value through negotiation.

Compensation trade does not involve direct capital tie-up between China and the foreign partner. The Chinese partner and his foreign counterpart are two separate legal entities. Each is responsible for his own profit and loss. The foreign partner is not subject to profit tax in China and does not participate in the management of the Chinese enterprise.

In this form of investment, supply of labour, management and factory building are usually coming from China. The goods manufactured will be shipped to the foreign partners. The value-added service provided by China will be considered as payment. The cost of the equipment or the patent fee will be paid off in three to five years. This is obviously
5.2) not suitable for the company's present plan because
the company is planning to have its own factory and
equipment and work on a long term basis (over 10
years) and so this form of investment will not be
considered.

5.3) Joint Exploration and Exploitation

This is mainly operative for the exploration and
exploitation of offshore oil and coal resources.
Foreign and Chinese partners, each a legal party of
its own, come to an agreement and contract for their
respective duties and rights. With regard to the
present scope of businesses, there is nothing related
to offshore oil and coal resources and so this form
of investment is not appropriate at all.

5.4) Equity Joint Venture

Foreign and Chinese partners intending to co-operate
under an equity joint venture need first to form a
limited company which has to be approved by the
Chinese government. According to 'The law of the
People's Republic of China on Joint Venture Using
Chinese and Foreign Investment' which was promulgated
5.4) on 8 July 1979 and revised on 4 April 1990, the new limited company is a legal enterprise in its own right and is jointly owned by the foreign and Chinese partners. The share ratio of the foreign partner is usually not less than 25% of the equity. Paid-up capital can be in cash or in kind – factory building, machinery and equipment, right of use of land, patented technology, know-how or industrial property rights. Duration of co-operation varies from trade to trade. In general, equity joint ventures in heavy industry are allowed a co-operation period of 20 years, however, if both parties want to extend the co-operation period, they should submit their application to the government six months before the expiry date.

According to the Law, the number of directors in the new company's board should be agreed by both parties. The nomination of chairman and vice-chairman of the board should be decided by both parties, should one party's representative become the chairman, the other party's representative will then become the vice-chairman. Disputes arising may be referred to an arbitral body agreed upon by both parties.

Profit and loss of the joint venture is to be shared
5.4) by the two partners, according to the share ratio after deducting tax and making provisions for the three types of reserves as are required by the Law. At present, joint ventures scheduled for 10 or more years of co-operation in China can be exempted from profit tax for the first two years and are allowed profit tax at half rate for the three profit-making years that follow. Joint ventures will enjoy a tax rebate of 40% of tax paid if they re-invest their profit in China.

Products produced by joint venture are mainly meant for export, however, it is also possible for the products to be sold to the domestic market if the need arises.

5.5) **Contractual Joint Venture**

Formation of a limited company with a separate legal identity from the foreign and Chinese partners is not necessary. Instead, an agreement stipulating the right and duties of both sides of the co-operating parties is a must. In general, the foreign partner provides funds, equipment and technology while the Chinese side provides land, factory premises, labour and raw material. The duration of a co-operation is
5.5) in general the same as is outlined for equity joint venture. Management is usually by the Chinese partner. Profits are shared at an agreed ratio which may be in the form of products manufactured or cash.

If a limited company is formed for the contractual joint venture concerned, taxation details are the same as those for equity joint venture. If no separate legal entity is created, the foreign enterprise is to be assessed at a progressive rate from 20 per cent to 40 per cent for the part in excess of a specific amount of taxable income. In the latter case, profit remitted out of China is again not taxable.

At the end of the contract, if, unless specifically stipulated in the contract, the assets of the contractual joint venture will become the property of the Chinese partner.

5.6) Wholly Foreign Owned Enterprise

Wholly foreign owned enterprise, if approved by the Chinese government, can, according to the law, obtain a legal identity in China. All the paid up capital, form of investment, management, profit and loss are
5.6) totally responsible by the foreign investor or the company.

Foreign enterprises can also apply to the government for exemption or reduction of tax. This applies to foreign enterprises located in all the Special Economic Zone and the fourteen coastal cities.

According to the Chinese law, foreign enterprises can remit their legitimate profit, other incomes and capital to overseas. Regarding foreign exchange balance problem, the foreign investors have to handle the issue by themselves. If the foreign exchange balance problem was created by the sales of products to the domestic market, then the organization which has approved such sales of the foreign enterprises will have to take care of the problem.

5.7) Comparisons of the Three Forms of Investment

The obvious advantage of the wholly owned enterprise concept is that the foreign investor can operate the business independently, which can also eliminate the possible conflicts arising from the two parties regarding operation, ratio of paid-up capital, share of profit or loss, etc. As a result of that, the
5.7) efficiency of the operation may tend to be higher. However, with this form of investment, the foreign investor must have enough capital for its operation and it may lose the support of the local partner in penetrating the domestic market or increase the complexity in applying for government preferential terms. Moreover, the local partner will be much more familiar with the rules or regulations that will affect the operation of the company and without their involvement, this part of work may possibly reduce the efficiency of the operation.

The disadvantages of the wholly owned form of investment can basically be resolved by adopting the equity joint venture or contractual joint venture forms of investment. However, these two forms also have their own possible disadvantages that may result from selecting the wrong Chinese partner. The major difference between equity joint venture and contractual joint venture is that equity joint venture investment is generally adopted for larger investment, high technology and the period of cooperation is long, whilst the contractual joint venture is more flexible and is mostly for shorter time frame co-operation.
5.8) Final Selection of Investment Form

According to the corporate case examples from Nigel Campbell[18], the logic behind China's encouragement of joint ventures is that the foreign partners put up enough equity in hard currency to cover the foreign exchange requirements of the initial investment; subsequent foreign exchange requirements being met out of earnings from exports, which the Chinese like to have the foreign parts to arrange. This simple model can work well where the foreign investor is going to use the cheap Chinese labour to manufacture products for a known market or where import substitution results in a saving of foreign exchange, which the Chinese side is willing to allocate to the joint venture. From this, we can see that the company's present criteria do satisfy the above points.

In addition, we can also have a look at the statistics of the foreign investments in China. Up to the end of June 1988, the amount of approved foreign investment was US$24.88 billion and the number of approved new firms with foreign investment was 12,161. Among these new firms, 6,003 were equity joint venture, 5,837 were contractual joint venture, 274 were wholly owned and the balance 47 were joint exploration. It reveals the fact that equity joint
venture and contractual joint venture are the most popular forms of investment and this also match with our findings from the questionnaire.

In fact, our interviews with some of the investors in China show that the more appropriate investment type for long term investment is equity joint-venture because this investment form usually receive the greatest support from the Chinese Government. As a result, with respect to the company's intention of long term commitment and co-operation policy with China, it is therefore appropriate for the company to adopt the equity joint venture investment form. However, it is important that the company should select the right partner who really has the right knowledge about the business, willingness to co-operate and the channels to promote the company's products in the domestic market. A table showing all the arguments for using equity joint venture investment form is listed in table 2 for reference.
### SUMMARY OF THE ARGUMENTS FOR USING EQUITY JOINT VENTURE

<table>
<thead>
<tr>
<th>Areas</th>
<th>Advantages of Equity Joint Venture</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Marketing</td>
<td>a) Supports of Chinese Partner in sales promotion</td>
</tr>
<tr>
<td></td>
<td>b) Make use of possible connections from the Chinese Partner</td>
</tr>
<tr>
<td>2) Tax</td>
<td>a) Preferential tax scheme</td>
</tr>
<tr>
<td>3) Sales</td>
<td>a) Products can be sold back to the domestic market</td>
</tr>
<tr>
<td>4) Administration</td>
<td>a) Operate as a separate legal entity in China</td>
</tr>
<tr>
<td></td>
<td>b) At the end of the co-operation, assets of the equity joint venture will not become the property of the Chinese Government</td>
</tr>
<tr>
<td></td>
<td>c) Dealings with the local authorities can be handled by the Chinese Partner</td>
</tr>
<tr>
<td></td>
<td>d) Subject to approval, the foreign participant can be contracted for operating the equity joint venture enterprise</td>
</tr>
<tr>
<td>5) Initial Capital</td>
<td>a) The requirement for initial capital outlay can be lowered</td>
</tr>
<tr>
<td>6) Operating Period</td>
<td>a) Suitable for long term investment (over 10 years)</td>
</tr>
<tr>
<td>7) Support from</td>
<td>a) Equity joint venture usually receive more support from the Chinese Government than other investment forms</td>
</tr>
<tr>
<td>Government</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 6

COST ANALYSIS AND CASH FLOW ANALYSIS

6.1) Introduction of Cost Analysis

Though we have screened out Shenzhen and Zhuhai as the most probable place for our setting up of factory after taking into consideration of their hard investment environment, assuming the 'soft' factors of investment environment makes little difference among the special economic zones and those newly open areas, there is a further need to look into the cost-effectiveness of such investment in China.

6.1.1) Per Unit Gross Profit Comparison

First we will compute the data collected and make some estimation over the unit sales price and the unit cost, which include both the explicit and implicit costs. We shall compare among Shenzhen, Zhuhai and Hong Kong over the per unit (metric ton) gross profit, with the extra cost, incurred because of the company's extra management time and effort in Hong Kong, added to that of the factory so that we can make the administrative and selling expenses in Hong Kong constant in our contrast. Let's take
6.1.1) a look at the accounts and related notes below. All figures are shown per metric ton of steel fabricated product:

<table>
<thead>
<tr>
<th>Particulars</th>
<th>In H.K. Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H.K. (a)</td>
</tr>
<tr>
<td>Sales Revenue (b)</td>
<td>20,000</td>
</tr>
<tr>
<td>Less:</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>5,000</td>
</tr>
<tr>
<td>Factory Labour (c)</td>
<td>6,500</td>
</tr>
<tr>
<td>Rent &amp; Rates (d)</td>
<td>597</td>
</tr>
<tr>
<td>Depreciation on Workshop Building (e)</td>
<td>113</td>
</tr>
<tr>
<td>Depreciation on Equipment</td>
<td>272</td>
</tr>
<tr>
<td>Consumable Stores (f)</td>
<td>163</td>
</tr>
<tr>
<td>Royalty Fees</td>
<td>70</td>
</tr>
<tr>
<td>Water &amp; Electricity (g)</td>
<td>237</td>
</tr>
<tr>
<td>Insurance (h)</td>
<td>14</td>
</tr>
<tr>
<td>Workshop Supervisory Cost (i)</td>
<td>583</td>
</tr>
<tr>
<td>Repairs &amp; Maintenance (j)</td>
<td>188</td>
</tr>
<tr>
<td>Sundry Expenses (k)</td>
<td>57</td>
</tr>
<tr>
<td>Staff Transportation (l)</td>
<td>-</td>
</tr>
<tr>
<td>Material &amp; Product Transportation (m)</td>
<td>-</td>
</tr>
<tr>
<td>Accommodation Building Depreciation (n)</td>
<td>-</td>
</tr>
<tr>
<td>Labour Accommodation Allowance (o)</td>
<td>-</td>
</tr>
<tr>
<td>Outgoing Allowance for H.K. Staff</td>
<td>-</td>
</tr>
</tbody>
</table>
6.1.1) (cont'd)

<table>
<thead>
<tr>
<th>Particulars</th>
<th>In H.K. Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H.K. (a)</td>
</tr>
<tr>
<td>Less: Other Special Expenses (p)</td>
<td>-</td>
</tr>
<tr>
<td>Insurance for Shipping Out Goods</td>
<td>-</td>
</tr>
<tr>
<td>Implicit Cost (q)</td>
<td>-</td>
</tr>
<tr>
<td>Gross Profit:</td>
<td>6,206</td>
</tr>
</tbody>
</table>

6.1.2) Notes to Account:

(a) Per Unit Cost

The figures for Hong Kong are based on the company's existing factory in Hong Kong. After dividing by the aggregate total production of 2,000 metric tons in a year, we can get the unitized figure. The same calculation is done to the figures of Zhuhai and Shenzhen.

(b) Sales Revenue

The sales revenue is calculated based on the average current market price instead of transfer price for the products even though all the finished products will be sold back to
6.1.2) (b) the parent company at a lower price, as we assume that the factory in China will bear an appropriate portion of selling expenses to cover that discrepancy.

(c) Factory Labour

i) Factory labour costs are lower in Zhuhai and Shenzhen than Hong Kong.

ii) The average cost for Hong Kong labour is comparatively higher than some other industries because it requires skilled labour.

iii) The labour cost includes the wages, allowance, overtime pay, SEZ subsidize, bonus, housing allowance and social employment security fee.

iv) According to the Administrative and Service Centre of Foreign Investment, the labour cost in Zhuhai is about HK$450 and Shenzhen HK$550 per month respectively.

v) The number of workers in Hong Kong is 180, while Zhuhai and Shenzhen is 360.

(d) Rent & Rates

The land used in Hong Kong is about 6,000 m²
6.1.2) (d) but the size of the land in Shenzhen and Zhuhai will be 10,000 m² because more bulky items will be manufactured there and the amount need to be paid is $440,000 per year in Zhuhai and $700,000 in Shenzhen respectively.

(e) Depreciation on Workshop Building

All factory buildings need to be built by the company and the cost includes improvement. The period for depreciation is counted as 10 years.

(f) Consumable Stores

Consumable stores is exhausted proportional to the proficiency of the labour. Higher cost in Shenzhen is due to higher replacement cost there.

(g) Water & Electricity

Per unit cost of electricity is about 30% higher in China than Hong Kong.

(h) Insurance

Insurance here covers the marine/land
6.1.2) (h) transportation insurance for the materials, fire insurance as well as the general insurances for the safety of employees in China.

(i) Workshop Supervisory Cost

Supervisory cost is less heavier in China, for some of the factory heads and quality controller can be hired there at lower cost.

(j) Repairs & Maintenance

Repairs and maintenance of equipment is high in China for the lack of technicians as well as rough use of machining and equipment.

(k) Sundry Expenses

Sundry expenses include the stationeries, medical expenses and so on.

(l) Staff Transportation

 i) From (l) to (q), the costs are incurred in China only.

 ii) There will be 25 technical as well as
6.1.2) (l) managerial staff planned to travel frequently to and from Zhuhai or Shenzhen.

(m) Material and Product Transportation

According to the estimation from the transportation companies, the charges for transportation to Zhuhai is $125 and Shenzhen $150 per metric ton.

(n) Accommodation Building Depreciation

A building for residential use will be built to accommodate the planned 25 travelling Hong Kong staff. It will amortize in 10 years' time.

(o) Labour Accommodation Allowance

There is no labour accommodation allowance needed in giving workers in Hong Kong. Yet in Zhuhai or Shenzhen, as most of the labour are from other provinces, accommodation should be provided.

(p) Other Special Allowances

Other special expenses include some courtesy gifts given to the officials and banquets.
6.1.2) (q) **Implicit Cost**

Implicit cost includes the time cost in the transferral of the production base away from Hong Kong, where it is near to most buyers, on the job training time (learning time) given to the factory staff and the time and effort of the management in Hong Kong used in remote control. The inability to meet contracts and potential risk of losing contract due to slackness or incompetence of the factory supervisors or workers may all constitute the implicit cost.

6.1.3) **Conclusion**

From the above, we can see that investment in China is more cost effective than the existing production in Hong Kong, in spite of various unfavourable factors that we have put into the implicit cost. For investment in Hong Kong, we can get $6,206/20,000 = 31.03\%$ gross profit ratio per metric ton of sales, while in Shenzhen we can get about $9,546/20,000 = 47.73\%$ and in Zhuhai, $10,310/20,000 = 51.55\%$ gross profit ratio. And in the choice between Shenzhen and Zhuhai, it is of course more attractive investing in Zhuhai as they can provide $3.82\%$ more than Shenzhen in gross profit.
6.1.4) Results from Questionnaires (For Form of Questionnaires, See Appendix III)

By looking at the attractiveness of the hard environment in Zhuhai, and the seemingly lucrative business that the company can run, Zhuhai seems to be the better place for our investment. In order to reinforce some of the somewhat subjective estimation over the investment environment, form of investment and some of the implicit costs, we have made five number of interviews with government officials and senior staff of two joint venture companies in Zhuhai. Regarding the result of the 100 questionnaires sent out, we received 40 questionnaires back and the survey result indicates that Zhuhai would be a better location in running a good business than Shenzhen. The figures from similar companies reveal the following facts:

<table>
<thead>
<tr>
<th>Description</th>
<th>Zhuhai (%)</th>
<th>Shenzhen (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Supply of skilled labour</td>
<td>*VG</td>
<td>G</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>2) Labour productivity</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>3) Abilities of labour in handling more complicated task</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4) Condition of electricity supply</td>
<td>0</td>
<td>70</td>
</tr>
</tbody>
</table>

Remarks: *VG - Very good
* G - Good
* S - Satisfactory
* F - Fair
* P - Poor

- 51 -
6.1.4) (cont'd)

<table>
<thead>
<tr>
<th>Description</th>
<th>Zhuhai (%)</th>
<th>Shenzhen (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5) Availability of transportation and communication facilities</td>
<td>10 70 20 0 0</td>
<td>10 60 30 0 0</td>
</tr>
<tr>
<td>6) Condition of other utilities supply</td>
<td>0 10 90 0 0</td>
<td>0 10 80 10 0</td>
</tr>
<tr>
<td>7) Production cost being saved as compare with the cost in H.K.</td>
<td>10 20 70 0 0</td>
<td>0 20 70 10 0</td>
</tr>
<tr>
<td>8) Local workers get on with the senior staff from H.K.</td>
<td>0 80 20 0 0</td>
<td>0 70 20 10 0</td>
</tr>
<tr>
<td>9) Efficiency of the municipal government</td>
<td>0 0 90 10 0</td>
<td>0 0 90 10 0</td>
</tr>
<tr>
<td>10) Supply of accommodation for the staff</td>
<td>0 0 80 20 0</td>
<td>0 10 70 20 0</td>
</tr>
<tr>
<td>11) Extent of support received from the municipal government</td>
<td>0 50 50 0 0</td>
<td>0 30 60 10 0</td>
</tr>
<tr>
<td>12) Usefulness of supporting industries</td>
<td>0 60 40 0 0</td>
<td>0 20 60 20 0</td>
</tr>
<tr>
<td>13) Efficiency of the financial system</td>
<td>0 60 40 0 0</td>
<td>0 40 60 0 0</td>
</tr>
<tr>
<td>14) Labour turnover rate</td>
<td>0 20 80 0 0</td>
<td>0 10 80 10 0</td>
</tr>
<tr>
<td>15) Degree of interferences suffered</td>
<td>10 80 10 0 0</td>
<td>0 10 70 20 0</td>
</tr>
</tbody>
</table>

Remarks: *VG - Very good  
* G - Good  
* S - Satisfactory  
* F - Fair  
* P - Poor  
*VL - Very low  
* L - Low  
* M - Medium  
* H - High  
*VH - Very High
6.2) Cash Flow Analysis

The above section contrasts the estimated per unit revenue and cost of the three areas and we can see clearly that Zhuhai seems to be more cost effective for our investment. The relative calculations by unit are based on the regular production of 2,000 metric ton per year, while the undulated production situation for set-up period is deliberately ignored for simplicity in making comparison. This deliberation has done no harm, for at the moment whether the investment plan will be effective or not can hardly be predicted. This prediction will be rested on the following section, which deal with the projection of the cash flow in the coming 10 years after the start-up of the factory. After discounting the expected future cash flow into present value and deducting the investment outlays from it, if we can get a positive net present value, then the investment can be said to be effective and the plan will then be put into action.

6.2.1) Investment Requirements

Now let's first look at the estimated investment requirements for the project as the following table (The investment is assumed to be made from 1992 on):
Table 3

Estimated Investment Requirements

<table>
<thead>
<tr>
<th>Capital Investment</th>
<th>1992 (HK$)</th>
<th>1993 (HK$)</th>
<th>Up To 2001 (HK$)</th>
<th>Total (HK$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Covered Workshop for 4,000 m²</td>
<td>3,500,000</td>
<td>0</td>
<td>0</td>
<td>3,500,000</td>
</tr>
<tr>
<td>2) Accommodation Building Area for 1,000 m²</td>
<td>1,500,000</td>
<td>0</td>
<td>0</td>
<td>1,500,000</td>
</tr>
<tr>
<td>3) Machinery Equipment:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) 1 unit of 45MT mobile crane</td>
<td>1,000,000</td>
<td>0</td>
<td>0</td>
<td>1,000,000</td>
</tr>
<tr>
<td>ii) 1 unit of 200MT press</td>
<td>1,000,000</td>
<td>0</td>
<td>0</td>
<td>1,000,000</td>
</tr>
<tr>
<td>iii) 2 units of band saw</td>
<td>1,500,000</td>
<td>0</td>
<td>0</td>
<td>1,500,000</td>
</tr>
<tr>
<td>4) Other Process Equipment</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>0</td>
<td>2,500,000</td>
</tr>
<tr>
<td>5) Vehicles</td>
<td>500,000</td>
<td>500,000</td>
<td>0</td>
<td>1,000,000</td>
</tr>
<tr>
<td></td>
<td>10,250,000</td>
<td>1,750,000</td>
<td>0</td>
<td>12,000,000</td>
</tr>
<tr>
<td>Net Working Capital</td>
<td>2,000,000</td>
<td>5,000,000</td>
<td>0</td>
<td>7,000,000</td>
</tr>
<tr>
<td>Total Investment</td>
<td>12,250,000</td>
<td>6,750,000</td>
<td>0</td>
<td>19,000,000</td>
</tr>
</tbody>
</table>

Here, we need to mention two assumptions:

1) From 1994 on, all the current assets and current liabilities are balanced off, leaving the net working capital for these 8 years as zero, and no recovery of working capital thereafter is expected.
6.2.1) ii) The working life for all the buildings, machinery equipment, process equipment and which are assumed to be lasting up to 2001, once again no salvage value for the fixed assets is assumed.

In order to get the present value of the investment outlay, its totality of $19,000,000 in nominal dollars should be discounted by an appropriate cost of capital, or the minimum required rate of return, which is assumed here to be an annual rate of 12%. Algebraically, we have got the discounted value as:

\[ P_v = \sum_{i=1}^{n} \frac{I}{(1 + K)^i} \]

where \( P_v \) = present value
\( I \) = investment outlay
\( K \) = cost of capital
\( i \) = number of year

\[ = \frac{12,250,000}{1.12} + \frac{6,750,000}{1.12^2} \]
\[ = 10,937,500 + 5,381,059 \]
\[ = 16,318,559 \]

6.2.2) Cash Flow Estimation

The following table shows the series of income and expenses statements with the expected net cash flow shown for our computation of the present value. (See Table 4)
6.2.3) Notes to Cash Flow Analysis Table:

a) i) The net sales revenue in the first three years are projected to be less than that of the years thereafter, as only 70%, 80% and 90% of the regular output by the same factory are expected for the years 1992, 1993 and 1994 respectively. In other words, there will be less than full capacity in the production for the initial three years.

ii) Despite i), the firm will foresee its production grow in the second and third year because there will be improvement in production efficiency due to repeated 'learning' and 'experiencing'.

iii) The production level will be assumed to keep constant after the third year, for 1) our assumption that identical basic technology was used in production, 2) the likely happening in China of such incident as high turnover rate stalling the regular production and cancelling out the efficiency in improved production.

iv) As the price of the steel fabricated
6.2.3) a) iv) The product is assumed to be adjusted upward by 10% each year due to sales growth and inflationary force, there is no wonder that the net sales revenue will rise each year.

b) The nominal cost will rise at 14% per annum because of inflation assumable.

c) i) Since we assume the price of the product is the market selling price, despite the fact that the company will sell back to its own company in Hong Kong at a lower price, before selling to buyers, there is a need for the factory to include part of the actual selling and administration expenses incurred in Hong Kong.

ii) From the past record, the total selling and administrative expenses is about 30% of the net sales revenue. Hence our calculation will make use of such rate.

d) i) In computing the taxable income, the implicit cost, though no company is allowed to insert it into their financial accounting reports for tax assessment, is here included because they are relevant cost for our estimation of the cash flow.
6.2.3) d) ii) Foreign investments in Zhuhai enjoy tax benefits by: 1) Free of tax payment for first two years since net profit appears, 2) Half of the tax needs to be paid for the following three years thereafter, 3) Income tax rate is 15%, just half of the usual tax rate charged on the enterprises in China, 4) No other tax payment is required to pay to the local or municipal government because of government exemption.

e) Though depreciations are treated as cost in tax assessment, we shall add them back to the net income in order to calculate the actual cash flow.

6.3) Net Present Value Analysis

From Table 4, we have worked out the cash flow of the project for the next 10 years. To see whether the proposed project will result in a positive net present value (NPV) or not, we have to perform the following calculations using the NPV formula.

\[ NPV = \sum_{t=1}^{10} \frac{NCF_t}{(1+i)^t} - C_t \]  \hspace{1cm} (6.1)

where \( NCF_t \) = net cash flow in year \( t \)
\( t = \) year number
\( i = \) cost of capital (discount factor)
\( C_t = \) project's investment outlay

Substitute the value of Table 4 into equation (6.1) with \( i = 12\% \), we get
6.3) \[ \text{NPV} = \$950,000 + 3,277,000 + 5,638,000 + 8,644,000 \]
\[ \frac{(1+12\%)}{(1.12)^2} + \frac{8,373,000}{(1.12)^3} + \frac{7,343,000}{(1.12)^4} + \frac{6,735,000}{(1.12)^5} + \frac{5,890,000}{(1.12)^6} \]
\[ + \frac{4,758,000}{(1.12)^7} - \frac{2,812,000}{(1.12)^8} - 16,318,559 \]
\[ = \$13,166,368 \]

To calculate the Internal Rate of Return for the project, we have to equate NPV to zero and solve for the IRR \( k_i \).

\[ \text{NPV} = \sum_{t=1}^{10} \frac{\text{NCF}_t}{(1+ki)^t} - C_t = 0 \]

After calculation, we find out that it is about 25.5% which is a rather satisfactory figure when comparing with the cost of capital of 12% and so we can classify this project as a feasible one. If the project is approved by the top management, the investment plan will be put into action. In the procedures for setting up a joint venture project in China, we have summarized the relative procedures in a flow chart as depicted in Appendix IV.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Sales Revenue (a)</td>
<td>28,000</td>
<td>35,200</td>
<td>43,560</td>
<td>53,240</td>
<td>64,420</td>
<td>70,862</td>
<td>77,949</td>
<td>85,744</td>
<td>94,318</td>
<td></td>
</tr>
<tr>
<td>Less: Cost Incurred (b)</td>
<td>19,380</td>
<td>22,093</td>
<td>25,186</td>
<td>28,712</td>
<td>32,732</td>
<td>37,314</td>
<td>42,538</td>
<td>48,493</td>
<td>55,282</td>
<td>63,574</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>8,620</td>
<td>13,107</td>
<td>18,374</td>
<td>24,528</td>
<td>28,832</td>
<td>27,106</td>
<td>28,832</td>
<td>29,456</td>
<td>30,462</td>
<td>30,744</td>
</tr>
<tr>
<td>Less: Selling &amp; Administrative Expenses (c)</td>
<td>220</td>
<td>2,547</td>
<td>5,306</td>
<td>8,566</td>
<td>8,263</td>
<td>7,780</td>
<td>7,065</td>
<td>6,071</td>
<td>4,739</td>
<td>2,449</td>
</tr>
<tr>
<td>Net Income before Tax</td>
<td>200</td>
<td>2,547</td>
<td>5,306</td>
<td>8,566</td>
<td>8,263</td>
<td>7,780</td>
<td>7,065</td>
<td>6,071</td>
<td>4,739</td>
<td>2,449</td>
</tr>
<tr>
<td>Income Tax (d)</td>
<td>-</td>
<td>398</td>
<td>642</td>
<td>620</td>
<td>1,167</td>
<td>1,060</td>
<td>911</td>
<td>711</td>
<td>367</td>
<td></td>
</tr>
<tr>
<td>Net Income</td>
<td>200</td>
<td>2,547</td>
<td>5,306</td>
<td>8,566</td>
<td>8,263</td>
<td>7,780</td>
<td>7,065</td>
<td>6,071</td>
<td>4,739</td>
<td>2,449</td>
</tr>
<tr>
<td>Add: Depreciations</td>
<td>730</td>
<td>730</td>
<td>730</td>
<td>730</td>
<td>730</td>
<td>730</td>
<td>730</td>
<td>730</td>
<td>730</td>
<td>730</td>
</tr>
<tr>
<td>Net Cashflow</td>
<td>950</td>
<td>3,277</td>
<td>5,638</td>
<td>8,644</td>
<td>8,373</td>
<td>7,343</td>
<td>6,735</td>
<td>5,890</td>
<td>4,758</td>
<td>2,812</td>
</tr>
</tbody>
</table>
CHAPTER 7

CONCLUSION

From the above studies, we have finally arrived at the conclusion that Zhuhai will be the best place for the company to build its factory with regard to economic considerations. As far as investment form is concerned, with the objective of a long term investment, equity joint venture turns out to be most appropriate form.

From the cash flow analysis section, we have found out that this investment project has a net present value (NPV) of HK$13,166,368 and the internal rate of return of about 25.5%. These findings did prove that this investment project is viable and the work following this report will be the drafting of proposal to top management for approval, after that, the actual planning of the factory layout, manpower planning and negotiation with the Zhuhai municipal government will commence.

In the above analysis, the major emphasis is being put on the quantitative considerations, and not much has been covered about the qualitative parts. In fact, some of these qualitative factors will positively enhance the success of the investment. To name a few examples, relationships with the senior officials in the municipal government, attitude and mutual understanding of the two
co-operating parties and fair ways of distribution of profits are also important factors that may affect the actual outcome of the investment.

There are two other common problem areas encountered by foreign manufacturing companies in China: the poor quality and unreliable output level. From our personal interviews with some of the successful companies, it seems important that strict quality control must be exercised to guarantee the quality of the output and a suitable incentive scheme must be adopted to motivate the workers to achieve the target output stipulated by the management. The last but not the least is the fact that regular trainings should be given to them to make sure that they can have the necessary skill and knowledge about the work that they are expected to perform.

Finally, to ensure the success of this new venture, management should from time to time review the operating conditions of the new factory and perhaps be patient with the initial unexpected problems such as electrical power interruptions, inadequate supporting facilities and labour disputes which may occur with the operation. If all the above points can be handled properly, the chance of the success of this investment project will be very high.
APPENDIX I

INDONESIA

General Economic Situation

Trade liberalization measures implemented in the past two years have inevitably affected Indonesia's economic growth. GNP, which increased by 20% in value terms in 1982, declined by 4% in 1983 due to the impact of the oil crisis. With continued liberalization and sharp increases in earnings, the economy began to recover. The government's ambitious structural adjustment program called for a radical restructuring of the industrial sector.

The bold policy of reducing import duties and other restrictions on foreign trade has led to painful adjustments for some enterprises. The government has introduced measures to support enterprises through import restrictions and other fiscal measures.

APPENDIX I

Imports and Exports

Indonesia's trade is mainly exported by oil, palm oil, rubber, and other products. In recent years, the government has taken measures to support domestic industries and reduce imports.

Import Policy

Indonesia employs a protectionist trade policy, which includes high import tariffs and various taxes. However, the government is gradually liberalizing its import policy.

Importers operating in Indonesia are required to have a import licence to become eligible as authorized importers. Imports for
Appendix I

INDONESIA

General Economic Situation

Trade liberalization measures implemented in recent years have inevitably stimulated Indonesia's demand for imports, which increased by 20% in value terms in 1989. Imports have largely been confined to capital and industrial goods while consumer goods have accounted for 4-5% of the total.

With continued industrialization and rapid increase in foreign and domestic investment in the country, Hong Kong's export to Indonesia will likely remain concentrated in machineries and semi-manufactures.

Finding the right connection is the most important factor in doing business with Indonesia. For exporter of machinery and industrial supplies, it is best for them to approach the trading companies in Jakarta directly.

Though largely an agricultural country, Indonesia has made significant progress in recent years in developing a modern infrastructure and an industrial base to facilitate the exploitation and processing of its abundant resources. The role of the industrial sector in exports has been increasing.

Indonesia government participation in the nation's economic activities, including importing, retailing, remain extensive.

Foreign investors have been drawn to Indonesia due to stable political government; large and inexpensive labour force (unskilled labour's wages at around US$400/year), and abundant natural resources.

Main problems currently faced by the nation include the highly skewed distribution of income and wealth, unemployment (some 2.5 million people enter the labour force every year), huge external debt, and inflation.

Indonesia manufacturing and marketing activities are concentrated in Java (60%).

Indonesia's import market increased by 7% mainly comprised products that are needed for the country's industrialization ie machinery and other capital goods; semi-manufactures and crude materials.

Import Policy

Indonesia employs a protective trade policy, imposing high import tariffs and various taxes. However, the government is gradually liberalizing its import policy.

Importers operating in Indonesia are required to have an import licence to become eligible as authorized importers. Imports for
non-commercial purposes can be made without a licence provided approval is obtained from the Department of Trade. Companies without an import licence will need to utilize an import agent.

Since October 1968, only Indonesia nationals are eligible to be authorized importers, though certain established foreign firms engaged in products in Indonesia are permitted to import machinery, equipment and raw materials for their own projects.

Quota restrictions are imposed on some imports, eg certain types of motor vehicles, carpets, jute bags, and glass sheets.

Normally, imported products have to go through inspection. In order to reduce bureaucratic obstacles, the Indonesian government has employed the Societe General de Surveillance (SGS, are of the world's leading import inspection companies) to perform the duty according to international standards. Through this company's worldwide network, comprehensive inspections are carried out in the country of origin.

There are 3 taxes on imports, namely, import duties, value added tax, luxury sales taxes.

Import duties are applied mainly ad valorem on CIF value and assessed under the Harmonized System (HS). Tariffs are high and on non-essential items and goods competing with locally produced ones ranging from 0-100% (as high as 225%).

Concession to joint venture - full exemption from import duties for most equipment and raw materials.

Capital goods are exempt from VAT (10%).

Marketing

For exporters of machinery and industrial supplies, it is best to approach the trading companies in Jakarta directly.

Sucess very much depends on personal connections. To handle complicated import regulations and red tapes in government offices, finding the right connection and partner is crucial. Appointing an agent with good reputation and track record is always the most effective way in selling directly to Indonesia. Machinery and industrial supplies are usually imported through agents, who, with distribution networks in major cities like Jakarta, Bandung and Surabaya, can provide after-sales services. Sometimes they are also involved in advertising and promotion activities eg organizing of exhibition.

Singapore has been using as an Entrepot partly due to custom delay. Also, transporting cargoes (by air or by ship) directly from Hong Kong to Jakarta may take a longer time than routing through Singapore; it is also more costly.
THAILAND

General Economic Situation

The biggest growth sector in 1989 was again construction. The combination of demand for housing across all strata of Thailand society, the need for new hotels and office towers, and government's continuing infrastructural development programmes stimulated the sector to about 20% growth for the year.

More than 200 residential projects were announced early 1989. By the end of the year, projects for more than 5,000 tourist class-and-above hotels rooms, and dozens of office towers had also been announced. Given the restrictions on building materials capacity, shortage of skilled labour, experienced construction companies and the number of piling contracts, it was clear that not even half of this could possibly be in place in 1992.

Although a moderate economic slow down is expected for 1991, the Thai economy is fundamentally strong. This rise in its per capita income (currently at US$1,200) and its continual liberalization has created new demands.

Due to Thailand's hardworking labour force, low wages, an investment incentive programme, a pro-business economic policy and political stability, the nation has attracted substantial inflow of foreign investment.

Imports have concentrated in capital goods, raw materials and semi-manufactures totalling 92% of US$25.7 billion (+29%).

Traditionally, Thailand has an inward-looking policy that protects its domestic market from competing with imports. Import barriers are in form of import licensing, high tariff and taxes. Import tariffs are generally lower for raw materials and capital goods (10-40%).

Thai government has indicated its intention to liberalize imports. Barriers have been reduced in 9/90. The government lower the import duty on certain types of machinery from 20-60 to a flat rate of 5%.

Availability of cheap labour - US$90/month.

Growth industries included processed food, construction materials, transport equipment, and household electrical products.

Nevertheless, the rapid expansion of Thailand's economy has imposed severe strains on its infrastructure, mainly caused by over-concentration of industrial and trade activities around the capital city of Bangkok. With about 10% of the nation's population, Bangkok handles over 90% of its total trade. This has created serious bottlenecks in transportation and communication system, thus forming a major constraint for economic development.
Another problem for Thailand economy is the acute shortage of professional staff and skilled labour such as engineers and mid-level managers. The tight labour market has meant that companies have to pay considerably more to retain staff. Public sector wages increase 15% and minimum wages increase 15% to US$3.5 per day.

Rise in inflation exceeds 7% (1990) due to rocketing land prices, shortage of construction materials, and higher food prices and wages.

About 40% of the imports is capital goods; raw materials and intermediate goods account for 35%.

Major import items are machinery and mechanical appliances, mineral fuels, electrical machinery and equipment, articles of iron and steel, and organic chemicals.

Major sources of import are Japan and the US which respectively accounted for 30% and 11% of Thailand's imports in 89. Japan has been very successful in selling both capital and consumer goods to Thailand.

**Import Licensing Controls**

Import licenses are required for 75 categories of goods. The importation of such goods requires an application to relevant government agencies for approval. Import licenses are usually issued for a certain period of time.

**Customs, Tariffs and Other Charges**

Tariff rates for raw materials and capitals range from 10 to 40%. Most duties are ad valorem, calculated by weight or by volume (or the higher of the two). In addition, imports are also subject to business tax (9%) and municipal tax (10% of business tax). Where duty is paid in cash, a 2% discount is given.

Machinery and materials imported for industrial use, when approved by the Board of Investment, may be exempted from duty or subject to a preferential rate.

**Liberalization of imports and foreign exchange market.** Thai government is going to reduce import barriers gradually.

During the second quarter of 90, the Thai government announced a series of liberalization measures with respect to the foreign exchange market. It removed practically all restrictions on the international payments and transfers on the current account.

**Marketing**

Bangkok is the distribution centre housing nearly mostly of the importers, agents, wholesalers and retailers.

In marketing foreign products in Thailand, its unique social and cultural characteristics must be considered. Labelling and instructions should be in Thai languages.
General Economic Situation

Hong Kong's domestic export to Malaysia comprise mainly semi-manufactures and industrial goods.

Malaysian government has increased emphasis on infrastructure (shown in 89-90 budget). Development expenditure is up 18% and much of the increase has been earmarked for the removal of the bottlenecks in the transportation system.

The construction sector will soon be the fastest growing area in the Malaysian economy. The infrastructural development, coupled with an upsurge in demand for new factories and housing and the rapid appreciation in the value of commercial property in Kuala Lumpur (up 100% in less than 12 months), has tripled growth in construction to 8.5% in 1989.

Malaysia's tariff structure is rather selective in its application, with protection for certain industries. In the cases where local production is low or non-existent eg watches, the tariff can be exempted. The government has been gradually lowering its tariff barrier.

At the same time, the prospects for Hong Kong machineries and semi-manufactures export to the country should continue to be good in the coming years as both foreign and local investment activities are expected to remain buoyant.

Marketing

Malaysia is multi-cultural. Efficiency is often emphasized. Malaysia's imports are mainly handled by either the large trading groups, mostly with a diverse range of business activities or the small but flexible traders.

Import Tariff and Other Taxes

Malaysia's custom tariff is based on the Harmonized Commodity Description and Coding System (HS) of classification. Duties, generally assessed on a CIF basis, range from zero to 100% ad valorem, but few items are subject to charges of more than 50%. Machinery are often admitted duty-free and a standard 2% rate applies to almost all imported raw materials and components. Preferential duties on some products are given to ASEAN member countries (ie Singapore, Thailand, Indonesia, Philippines and Brunei).

A 5% surtax (applicable only to imports) plus a 10% sales (applicable to both imported and domestic goods) is levied on the CIF value of most imports. However, these charges may be reduced for machinery and raw materials imported for industrial purposes. The main products exempted include most food items, building materials and certain metals.
General Economic Situation

Imports grew by 29% to reach 88.2 billion. The broad-based growth in Singapore manufacturing activities spurred large increases in imports of electronic components, electrical circuit apparatus, plastic materials and iron and steel. Imports of non-oil primary commodities for re-export also increased significantly in responses to strong global demand.

The construction sector turned around in 1989 to grow by 3% after 4 1/2 years of decline. The improved performance was mainly attributable to the buoyant demand in the property market and general optimism about business prospects, which were reflected in the high occupancy rates and rentals in most categories of property during the year.

Although Singapore is being dragged down by the sluggish US performance, its slide is being cushioned by the strong regional growth in Malaysian, Thai and Indonesian economies.

Singapore had a good year in 89 with a 9.2% growth in GDP largely because of high growth in investments and strong domestic demand. In first half of 1990, growth rate slowed down to 8.4% due to Middle East crisis.

In March 1990, the government announced an expansionary budget for fiscal year 90/91 with reduced income tax for individuals and corporate tax for companies. This will further stimulate domestic demand.

Imports advanced by 22% during January to June 1990. They mainly consisted of machinery and transport equipment, mineral fuels, manufactured goods, and chemicals.

In cooperation with Malaysia and Indonesia, Singapore agreed to a plan of establishing a "growth triangle" in its vicinity ie the Jobore State and Batam Island. The goal is to divert the manufacturing, and to a lesser extent tourism and financial activities, to these areas while using Singapore's infrastructure and professional skills. Both government and private sectors will be involved.

Labour Shortage

In confronting the problem of labour shortage, Singapore imports a large number of foreign workers, particularly from Malaysia which contributed 10% of the total 1.2 labour force.

Import Policy

Singapore adopts a free trade policy and imposes no quota restrictions; most goods may be imported free of duty.
**Solid Waste Disposal**

Cleansing and refuse removal services are provided by the Environmental Health Department (EHD) of the ministry. The EHD operates a fleet of 229 refuse collection vehicles. Households pay a refuse removal fee of $5 a month while non-domestic premises are charged according to the volume of refuse generated. The department also provides a bulky waste removal services from domestic premises for a nominal fee.

In 1989, an average of 5,420 tonnes of refuse were removed daily by the department and private refuse collectors for disposal. 50.7% of the refuse were generated from domestic premises.

**The Public Work Department**

The Public Work Department (PWD) is responsible for the development and management of government buildings and infrastructural facilities, for example, public buildings, roads, flyovers and expressways. It also controls building projects in the private sector. It's the government's consultant for engineering, architectural and quantity surveying services.
APPENDIX II

MAP OF GUYANAS, TRINIDAD AND TOBAGO
MAP OF GUANGDONG, FUJIAN AND HAINAN
Dear Sir/Madam,

Re: Investment Environment of China

We are a couple of students from the Three-year MBA programme of the Chinese University of Hong Kong. As part of the requirements for the programme, we have to carry out a business research project, which is the "Feasibility study of Establishing a Heavy Steel Fabrication Factory in the Southern part of China."

In order to confirm our findings on the investment environment of Shenzhen and Zhuhai Special Economic Zone, we would like to request you to take ten to fifteen minutes of your valuable time to complete the questionnaire enclosed.

Thank you very much in advance for your kind support. Should you have any queries of suggestions, please kindly contact us (Angus Cheung at 7671118 or Royal Tam at 7396683) at any time convenient to you.

Yours faithfully

Angus Cheung and Royal Tam
Final year students of the Three-year MBA Program of the Chinese University of Hong Kong.
SURVEY OF THE INVESTMENT ENVIRONMENT OF SHENZHEN AND ZHUHAI SPECIAL ECONOMIC ZONE

QUESTIONNAIRE
SECTION A

Please give a tick to the bracket that best describe your company

1). Where is your company/factory located at
   ( ) Shenzhen    ( ) Zhuhai

2). What are the number of employees being employed
   ( ) 1 - 50      ( ) 51 - 100
   ( ) 101 - 250   ( ) 251 - 500
   ( ) over 500

3). What is the nature of your business
   ( ) Steelwork fabrication/manufacturing
   ( ) Garment/textile     ( ) Electronics/Electrical products
   ( ) Others (Please specify)

4). What is the form of investment that your company is using
   ( ) Compensation Trade     ( ) Equity joint venture
   ( ) Wholly owned          ( ) Contractual joint venture

5). If your answer to Question 4) is Equity joint venture or Contractual joint venture, please answer this question as well.
   What is the percentage of your company's share
   ( ) 1% - 20%     ( ) 21% - 49%
   ( ) 50%         ( ) 51% - 99%

6). How long is your investment plan
   ( ) 1 - 5 years   ( ) 6 - 10 years
   ( ) 11 - 19 years ( ) 20 - 29 years
   ( ) over 30 years

7). What is the approximate amount of your investment in terms of HKD
   ( ) below 500,000.00   ( ) over 500,000.00 & below 2,000,000.
   ( ) over 2,000,000.00 & below 5,000,000.
   ( ) over 5,000,000.00 & below 10,000,000.
   ( ) over 10,000,000.

8). What is the percentage of export that your company/factory currently operates
   ( ) No export     ( ) below 10%
   ( ) between 10 - 30% ( ) between 30 - 50%
   ( ) between 50 - 70% ( ) between 70 - 90%
   ( ) All export
SECTION B

Please tick those items that you think or feel that are appropriate for the questions below

8). The reason(s) that your company chose to operate in Shenzhen/Zhuhai is/are because

( ) abundant supply of labour
( ) low labour cost
( ) low land cost
( ) less stringent environmental controls
( ) close to the market
( ) advantages in transportation and communication
( ) ease of the management from Hong Kong
( ) favourable investment terms offered by the special Economic zones
( ) availability of skilled labour
( ) more support from the central/municipal government
( ) the municipal government less bureaucratic
( ) availability of the raw material for production
( ) availability of supporting industries
( ) better infrastructures being built than other places
( ) more efficient financial system to provide necessary services
( ) others (Please specify ______________________)

9). Why did you choose the investment form as specified in question 4

( ) afraid that technology being exposed to outsiders
( ) insufficient working capital
( ) avoidance of the interference of the Chinese partner
( ) want to make use of the Chinese partner in sales/marketing
( ) want to make use of the Chinese partner in getting more favourable investment terms
( ) insufficient knowledge about the laws in China
( ) like to maintain the control of the company
( ) like to retain the right of recruiting/dismissing employees
( ) reduce influences from the local authorities.
( ) other (Please specify ______________________)
<table>
<thead>
<tr>
<th>Question</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>10) How about the supply of skilled labour</td>
<td>5</td>
</tr>
<tr>
<td>11) How do you find the labour productivity</td>
<td>5</td>
</tr>
<tr>
<td>12) How do you find the abilities of the labour in handling more complicated task</td>
<td>5</td>
</tr>
<tr>
<td>13) What is the condition of electricity supply</td>
<td>5</td>
</tr>
<tr>
<td>14) How is the availability of transportation and communication facilities</td>
<td>5</td>
</tr>
<tr>
<td>15) What is the condition of other utilities supply</td>
<td>5</td>
</tr>
<tr>
<td>16) How is the production cost being saved as compared with the cost in Hong Kong</td>
<td>5</td>
</tr>
<tr>
<td>17) How do you find the local workers get on with the senior staff coming from Hong Kong</td>
<td>5</td>
</tr>
<tr>
<td>18) How about the efficiency of the municipal government</td>
<td>5</td>
</tr>
<tr>
<td>19) What is the supply of accommodation for the staff</td>
<td>5</td>
</tr>
<tr>
<td>20) What is the extent of support that was received from the municipal government</td>
<td>5</td>
</tr>
<tr>
<td>21) How do you find the usefulness of the supporting industries</td>
<td>5</td>
</tr>
<tr>
<td>22) What is your opinion about efficiency of the financial system (e.g. foreign exchanges, banking operations, etc)</td>
<td>5</td>
</tr>
</tbody>
</table>
23) What is the labour turnover rate  
   | very low | low | medium | high | very high |
   |       5 | 4   | 3     | 2    | 1        |

24) What is the degree of interferences that your operation has suffered  
   | very low | low | medium | high | very high |
   |       5 | 4   | 3     | 2    | 1        |

25) How do you rate your degree of satisfaction with regard to your investment  
   | very low | low | medium | high | very high |
   |       5 | 4   | 3     | 2    | 1        |

26) What is your overall comment regarding the investment environment of Shenzhen/Zhuhai  
   | very low | low | medium | high | very high |
   |       5 | 4   | 3     | 2    | 1        |

27) Please tick the items below that make you feel dissatisfied with your investment in Shenzhen/Zhuhai  

   - ( ) low skill labour  
   - ( ) high land cost  
   - ( ) government interferences  
   - ( ) poor quality of output  
   - ( ) problems with the local staff  
   - ( ) unreliable level of output  
   - ( ) government bureaucracy  
   - ( ) difficulties in penetrating in local market  
   - ( ) high hidden cost  
   - ( ) foreign exchange balance problem  
   - ( ) lack of adequate legal safeguard  
   - ( ) insufficient transportation facilities  
   - ( ) interferences from the Chinese partner  
   - ( ) others (Please specify)

*****************************************************************

Finally, we would like to gather some of your personal information for reference.

1. **J08 TITLE:**

2. **AGE:** ( ) UNDER 25 ( ) 25 - 35 ( ) 36 - 45 ( ) 46 - 55 ( ) over 55

3. **EDUCATION:** ( ) SECONDARY ( ) POST-SECONDARY ( ) UNIVERSITY ( ) POST-GRADUATE

4. **NUMBER OF YEARS WITH THE COMPANY:**

5. **YEARS OF WORKING EXPERIENCE RELATED TO CHINA TRADE:**

--- The End ---
APPENDIX IV

(1) Procedures for Setting Up a Joint Venture

Project is 

APPENDIX IV
(1) Procedures for Setting Up a Joint-Venture Project in China
1) Hong Kong Monthly Digest of Statistics (1985 - 1990)
2) Hong Kong Economic Report (No. 2200)
4) Asian Finance (Hong Kong) Journal, Vol: 14, ISS: 8, Date: 15 August 1988, PP: 52-57, 70
10) Hong Kong/Guangdong/Shenzhen
A Successful Business Partnership
Hong Kong Trade Development Council
13) Ta Kung Pao - 3 December 1990 Press
14) The West Economic Developing District of Zhuhai, China (Sanzao Administration District of Zhuhai 1989)
15) Brief Description of Guangzhou Economic and Technology Developing Zone (Administrative Committee for Guangzhou Economic & Technology Developing Zone)
16) Shantou Special Economic Zone Investment Guide (Administration of Shantou Special Economic Zone, Guangdong)
17) Recent Investment Environments of Guangdong, Fujian and Hainan, Trade Development Council, Nov 1990
18) Nigel Campell, China Strategies, The Inside Story, University of Manchester/University of Hong Kong, 1986, PP: 36-37, 52-65, 103

19) China Trade Handbook (Lawrence Fung, The Adsale People)

20) 閔建蜀,(投資環境的評估), 中國沿海開放城市投資環境及評價方法研討會, 一九八六年七月五日至九日

21) 閔建蜀, (談我國發展沿開地區), 大公報一九八八年四月二十日第四至五版


