

A CASE STUDY ON FOREIGN INVESTMENT IN
PRC'S LUBRICANTS INDUSTRY

by

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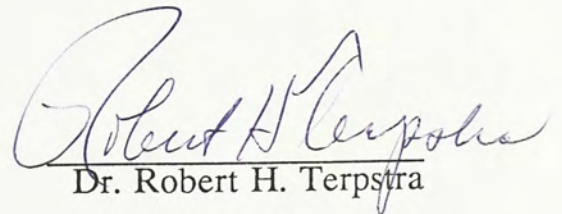
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ABSTRACT

Most of the investors usually rely on sophisticated analytical methods in making their investment decisions, but it is not true in PRC investments. In my case study, I found that investors in the PRC tend to put greater weight on their subjective judgements and feelings, which based on their common sense and experience, than scientific analysis. Basically, their decision making process has four stages: 1) investment climate analysis; 2) strategic advantages/disadvantages analysis; 3) quantitative economic value analysis; and 4) contractual terms considerations.

Shell Hong Kong Company Limited is now faced with three investment alternatives: 1) to build Tsing Yi plant; 2) to acquire China Sun Oil plant; and 3) to build Tsing Yi plant and acquire China Sun Oil plant. Based on the above framework of analysis, we find that the second alternative - to acquire China Sun Oil plant - will generate the highest economic value to Shell. However, the contractual terms will be very critical to the success of the joint venture. Also, since investment in the PRC involve greater risks, so the final decision will depend upon Shell's risk-return preference.

TABLE OF CONTENTS

ABSTRACT	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	iv
PREFACE	v
Chapter	
1. INTRODUCTION	1
2. METHODOLOGY	5
3. HISTORY OF CHINA SUN OIL LIMITED	9
4. BUSINESS ACTIVITIES OF SHELL HONG KONG COMPANY LIMITED:	
HONG KONG AND CHINA	14
5. INVESTMENT CLIMATE IN CHINA	18
6. STRATEGIIC CONSIDERATIONS OF SHELL'S INVESTMENT	28
7. QUANTITATIVE ANALYSIS OF THE INVESTMENT ALTERNATIVES	34
8. KEY FACTORS FOR SHEKOU JOINT VENTURE AGREEMENT	49
9. CONCLUSION	52
APPENDIX	55
EXHIBIT	57
BIBLIOGRAPHY	61

LIST OF TABLES

TABLE

1. Orientation of International Investment	24
2. Breakdown of Source of Foreign Investment	25
3. Average Value of Output	38
4. Plant Throughput	39
5. Capital Expenditure	39
6. Operating Cost - Alternative 1 (Tsing Yi Plant Only)	41
7. Operating Cost - Alternative 2 (Shekou Plant Only)	42
8. Operating Cost - Alternative 3 (Tsing Yi Plant)	42
9. Operating Cost - Alternative 3 (Shekou Plant)	43
10. Inventory	44
11. Account Receivable	45
12. Account Payable	45
13. Net Present Value	46
14. Internal Rate of Return	46

PREFACE

Investment in the People's Republic of China (PRC) has become a hot discussion topic since China adopted the open-door policy in 1978. Undoubtedly, some investors are making huge profit in their investments in the PRC, but at the same time even more investors are losing money or getting into trouble in their investments. Though we have already had a lot of theories about PRC investments, they seem to be incapable of providing useful guidelines for foreign investors. This is the main reason why I prefer to choose a real case to study.

The purpose of this paper are two-fold: 1) to establish a decision model for foreign investors; and 2) to analyze the investment alternatives of Shell Hong Kong Company Limited so that we can see under what circumstances Shell (investors) will choose to invest in China instead of Hong Kong.

The results of my analysis has convinced me of three things: 1) investor's experience and degree of acquaintance with China play important roles in making an appropriate investment decision in China; 2) the objective investment climate of the PRC sounds good, especially in SEZs; and 3) the contractual terms stipulated in the agreement are the key factors for the success of a joint venture - it implies that negotiation skills and

relations with Chinese officials are extremely important.

Finally, I would like to take this opportunity to express my appreciation to Sun's General Manager, Mr. Wu Zhiping, and Shell's Lubricant Manager, Mr. Linus Ng, for their support to this research paper. Also, I would like to thank Dr. Robert H Terpstra for giving me valuable comments and advices in the course of writing this paper.

HA FU-LAM

Chapter 1

INTRODUCTION

The mainland China, though far from a promised land of milk and honey, is an exciting place with tremendous opportunities for ambitious entrepreneurs. In the early '80s, shortly after PRC's implementation of open-door policy, foreign investors were attracted by the vast but largely unexplored China market. They held the view that the one-billion population in the mainland constituted a large consumption market in which they could earn a billion even if each Chinese spent a dollar in their products.

However, their dreams were broken as the Chinese officials clarified that what they really needed were investment in hi-tech and export-oriented industries, not in consumer-durables industries which just for domestic uses. As a result, most investors were seriously burned and lost money just after they took the first step to the door of the mainland China.

Coupled with the zig-zag pattern of economic policy, which added another source of uncertainty to foreign investors, so investors are reluctant to put more money into China especially for those large, long term investment projects. Noting the reducing overseas investment and discontent from investors, the

Chinese Government had taken some measures, which included a series of preferential treatments to foreign enterprises and joint venture, to boost the deteriorating investment environment. Nonetheless, investors still take an extremely cautious approach toward PRC investment.

Sun Refining and Marketing Company, the leading marketer of lube oils in the US, entered a joint venture agreement with China Petrochemical (SINOPEC) International in 1984. This included building a US\$6.5 million lube oil blending and packaging plant in China's Shekou Industrial Zone. This joint venture - known as China Sun Oil Company - was the first-ever petroleum blending and packaging industry foreign investment inside China. The plant now is fully operational.

The majority partner in this joint venture is Sinopec International which owns 55% shares, while the other partner, Sun Company, owns 45% shares.

The China Sun plant occupies nearly 220,000 square feet of land in Shekou, Shenzhen. It has an initial capacity of 50,000 metric tons per annum (mtpa), producing all grades of lubricating oil, including automotive, industrial lubricants and process oils. Base oils, one of the essential elements in lube oils blending, are supplied by China.

A Sun subsidiary, known as Sun Oil Far East, Inc. in Hong Kong, is responsible for marketing China Sun products within Far East region. This company also appointed Lithcon Petroleum Limited, a Hong Kong-based

company established in 1983 to assist in the formation of the joint venture and market Chinese Petroleum products abroad, as marketing agent.

Sun's initial aim is to export 70-80% of its production. However, the inaccessibility of large markets in some South East Asian countries such as Thailand and Malaysia due to duty barriers makes the possibility of achieving this target slim. On the other hand, as lube market in China is dominated by several oil giants like Mobil and Shell, Sun's relatively weak market penetration in China makes domestic sales an impracticable way to absorb all the un-sold products either. Coupled with management problems in the joint venture, Sun is now considering to sell outright its shares in China Sun Oil Company.

Meanwhile, Shell Hong Kong Company Limited, being one of the market leader of lube oils in Hong Kong and the Mainland China, is planning to expand its production capacity. Its original plan was to establish a plant in Tsing Yi, Hong Kong in order to cater for the steadily growing demand in both Hong Kong and China. After knowing Sun will sell out its shares in China Sun Oil, Shell has shown strong interest in acquiring the shares and started to discuss with Sun concerning this matter.

In effect, Shell has three alternatives in its expansion projects:

- 1) to build the plant in Tsing Yi;
- 2) to acquire the Shekou plant only; or
- 3) to built the Tsing Yi plant and acquire the Shekou plant at the same

time.

The purpose of this paper is to evaluate the respective pros and cons of the three alternatives. First of all, I will develop the methodology of analysis in the next chapter. Then, in chapter 3 and chapter 4, I will try to expose all relevant information about the two parties - China Sun Oil Limited and Shell Hong Kong Limited - involved in this case. In chapter 5 and 6, qualitative analysis about the investment climate in China and strategic considerations of Shell will be given. Then, I will evaluate the investment alternatives quantitatively in chapter 7. Afterwards, I will try to list out some key factors that Shell need to pay particular attention in negotiation. Finally, I will give the conclusion of this case analysis in Chapter 9.

Chapter 2

METHODOLOGY

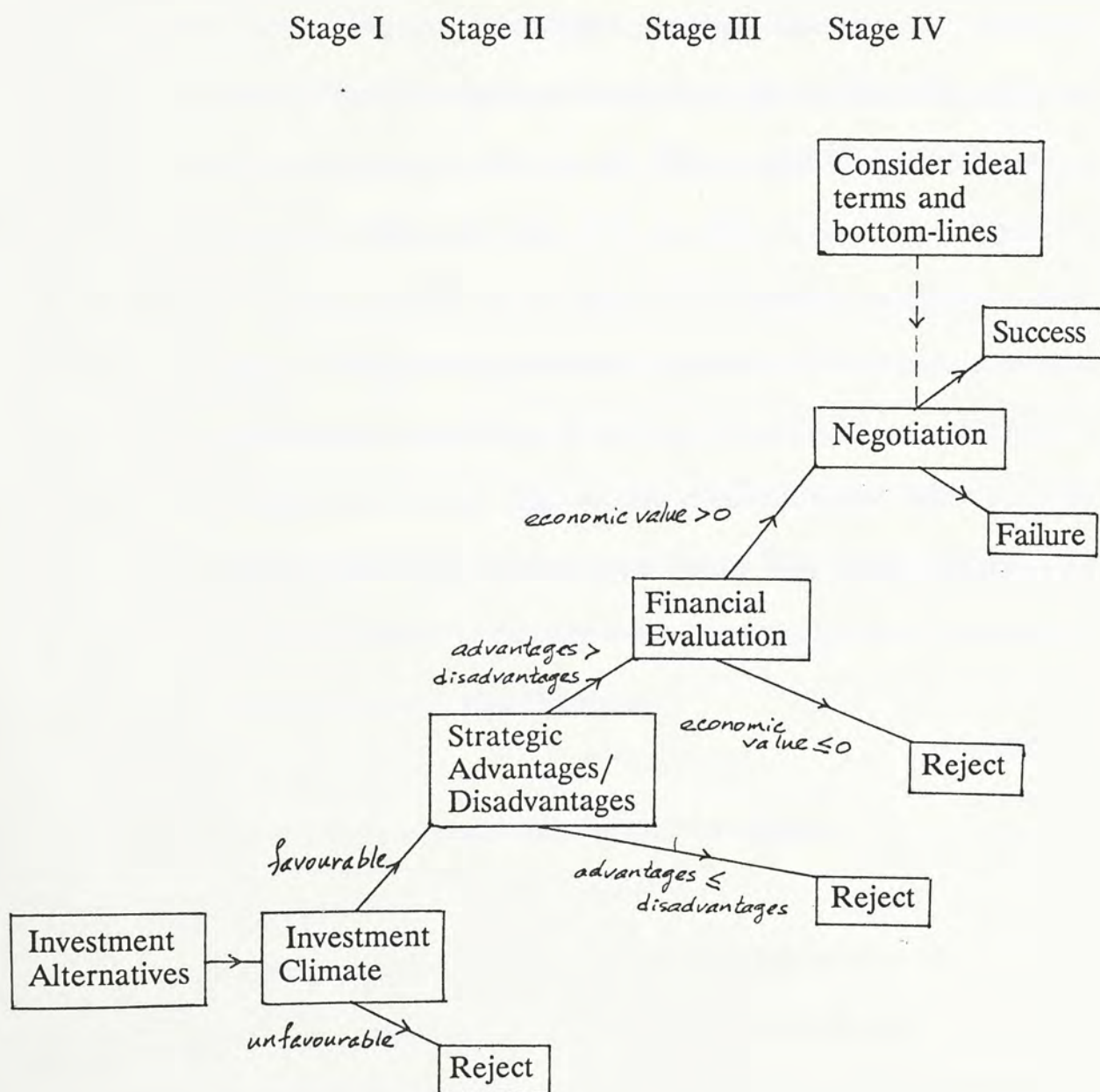
After several interviews with the Lubricant Manager of Shell, Mr. Linus Ng, and the General Manager of Sun, Mr. Wu Zhiping, I found that they share the same view in making their investment decision in the mainland China. Generally speaking, they put much emphasis on China's overall investment climate in their decision making process. They tend to break down the investment climate into two broad categories: political environment and economic environment. Then, the next step is to evaluate the strategic advantages and disadvantages of the investment project. However, in such early stage of analysis, evaluations are largely based on common sense and experience.¹

If the investment project is considered to be beneficial to the company in the first stage, then a more concrete and detailed financial evaluation of the project will be conducted. At the same time, they will start to dig out more facts and to consider the practical operational problems and difficulties that will probably be encountered in the future. Finally, the company will list out a set of conditions

¹According to Mr. Linus Ng and Mr. Wu Zhiping, they both said that doing business in China should depend more on common sense and experience than on sophisticated analytical techniques. They thought their experience and relations with Chinese officials could tell them even more about the profitability of investment projects. Both Ng and Wu have more than 10 years' experience in China.

under which it will accept or reject the investment project. In other words, the company is going to find out both the ideal conditions and bottom-lines so that it can fight for the best within these limits in the process of negotiations.

DECISION MODEL



Based on the above information, I devised a decision model for China investors as shown above.

Essentially, this decision model is consistent with Professor Mun Kinchok's analysis about "important factors of PRC investment" and investors' behaviour in China.² In this paper, I will basically follow the above model as the basis of analysis in this case.

However, concerning the quantitative financial evaluation of investment alternatives, both Shell and Sun have not mentioned their method of analysis they usually employ. In this case, I will use the "Discounted Cash Flow" method. However, for such a complicated case, it is not easy to estimate all possible future cash inflows and outflows. As our result will be affected by infinite number of variables ranging from global economic environment to local market conditions and from international political affairs to company administration, so we need to simplify our model a little bit so that we can concentrate our effort on some important areas and ignore the less important parts. That means simplification is inevitable in order to allow us to only focus on some significant variables so that it can be used again in similar situations.

First of all, we need to make some main assumptions:

- 1) component costs is the same for all three alternatives;
- 2) distribution costs is the same for all three alternatives;
- 3) no significant discrepancy between estimated and actual demand;
- 4) both local and international inflation rate are zero.

²Mun Kinchok. Evaluation Methods of Investment Climate. p.14

Secondly, we have identified some key parameters:

- 1) taxation rate;
- 2) average lube oils value;
- 3) plant throughput;
- 4) capital expenditure;
- 5) operating expenses;
- 6) change in working capital.

The value of these parameters will be very different in different situations. For example, the plant capacity required in Alternative 1 (Tsing Yi plant only) and Alternative 2 (Shekou plant only) will be different from that required in Alternative 3 (both Tsing Yi and Shekou plants). The former cases will be designed to cater for both Hong Kong and China markets, while the latter will be designed to serve these two markets separately by two plants. As a result, we need to estimate the respective value of parameters case by case. Finally, we can calculate the net present value (NPV) and the internal rate of return (IRR) of the investment alternatives.

Chapter 3

HISTORY OF CHINA SUN OIL LIMITED

The establishment of China Sun Oil Limited was the result of nearly four years of discussion between Sinopec International and Sun since 1980. After detailed negotiation between the two parties, the joint venture agreement was finally signed on 7 August 1984. In order to let readers have more understanding about the whole case, I will first give details of the partners and the operation and management of China Sun in this chapter.

The Partners - Sinopec

Perhaps, China Sun Oil would have been established several years later had the China National Petrochemical Corporation (SINOPEC) not been established in 1983. Sinopec was created by State Council and holds a status equivalent to an industrial ministry, but is distinct from a ministry in being chartered as a profit-making enterprise. "Responsibility System" is applied to Sinopec - it assumes full responsibility for its profit and losses and will pay taxes and retain all after-tax profits, including foreign exchange earned³. Such capitalistic feature

³Fujimoto, Akira. "Progress in China's Enterprise Reform." China Newsletter 68 (May-June 1987): 2-6.
Chai, Joseph C.H. "China's Industrial Responsibility Systems." China Briefing, July 1983.

of Sinopec has encouraged it to raise funds from foreign investors through forming joint venture.

Sinopec is China's largest corporation with registered capital and combined assets of Y21 billion. It inherited the nation's 39 largest refineries and petrochemical manufacturing facilities from 3 separate existing ministries: Petroleum, Chemicals and Textiles. The primary task of Sinopec is to eliminate the inefficiencies and duplication of facilities created by the more than two decades in which different ministries engaged in similar areas of refining and petrochemical manufacture without adequate reference to one another. It is also responsible for the overall planning and management of production and the import and export business in China's petrochemical industry (see Appendix 1).

Actually, Sinopec's foreign trade activities are mainly centered on its wholly-owned subsidiary - Sinopec International. Sinopec International basically acts as the first point of contact for foreign companies. It is also the only part of Sinopec empowered to negotiate and sign foreign joint ventures valued at more than Y5 million. For this reason, China Sun Oil, which has initial registered capital of US\$6.5 million, is a joint venture formed under Sinopec International.

The Partners - Sun Refinery and Marketing Company

The other partner is Sun Refinery and Marketing Company, which is a subsidiary of US-based Sun Company, Inc. Today the company is the third largest producer of lubricants in the USA and has significant worldwide operations. Sun

owns 45% China Sun Oil, while the remaining 55% is owned by Sinopec International. The joint venture is the first-ever investment in a petroleum blending and packaging operation in China by a foreign company.

China Sun Oil Limited

The China Sun plant occupies nearly 220,000 sq.ft. of land in Shekou, Shenzhen. It has an initial capacity of 50,000 metric tons per annum (mtpa), producing all grades of lubricating oil, including automotive, industrial lubricants, and process oils (see Appendix 2). It is also facilitated with modern high-speed barrel-packing equipment and a well-equipped laboratory for quality control and manufacturing process testing.

Base oils are supplied by China's Maoming refinery whereas Sun supplies the expertise to run the plant as well as specialist lubricating oil additives.

The agreement between Sinopec International and Sun runs for 15 years to 2000 and it may be extended by both sides through negotiation six months before the term expires. It is stipulated on the agreement that the whole plant will belong to Sinopec after the term expired. Therefore, Sun could get nothing except cash released from working capital if it decided not to renew the contract. On the contrary, if a new agreement can be reached after the expiration of the old agreements, then both sides need to make additional investment into the company. Of course, the amount of investment and the detailed terms and

conditions will only be discussed in 2000.

The China Sun Oil Company is under the leadership of the board of directors with general manager taking charge of the company. President of Sinopec International, Zheng Zhongfang, is the Chairman of the boards of directors and President of Sun, Mr. Campell, is the vice-chairman of the boards of directors. The company's general manager will be appointed by the US side while two deputy general manager will be appointed by the Chinese and US sides.

As far as marketing China Sun Oil's products is concerned, it appointed Lithcon Petroleum limited, a Hong Kong-based company established in 1983 to assist in the formation of the joint venture and market Chinese petroleum products, the marketing agent. According to the President of Lithcon Petroleum, Mr. Frederick Ho, the primary market for the output of the plant will be Southeast Asia. He estimated that, in the coming five years total Hong Kong demand for lube oils at between 30,000 and 40,000 tons per year, while demand throughout Southeast and East Asia, excluding China and Japan, is in the region of 1.3 to 1.5 million tons per year. The rapid economic growth of Southeast Asian countries offers promise to the future lubricating oil market.

It is unlikely that much of the plants output will be sold directly to China since it cannot generate foreign exchange earnings. However, China Sun Oil can still tap the China market indirectly through the Hong Kong-based China Resources Company which buys lube oils on the international market for

shipment to China. The joint venture is now gradually strengthening its business ties with China Resources.

Chapter 4

CONSTITUTION OF SHELL HONG KONG COMPANY LIMITED HONG KONG AND THE PRC

Shell Hong Kong Company Limited has been very successful in Hong Kong and the PRC since its incorporation in 1947. The company has been able to expand its operations in the PRC and has been successful in establishing a strong presence in the market. The company has been able to establish a strong presence in the market and has been successful in establishing a strong presence in the market.

Company Background

Shell Hong Kong Company Limited was incorporated in Hong Kong in 1947. The company has been successful in establishing a strong presence in the market and has been successful in establishing a strong presence in the market. The company has been successful in establishing a strong presence in the market and has been successful in establishing a strong presence in the market.

Chapter 4

BUSINESS ACTIVITIES OF SHELL HONG KONG COMPANY LIMITED: HONG KONG AND THE PRC

Shell Hong Kong Company Limited has been very active in both Hong Kong and the PRC. Shell's present business activities in Hong Kong and China will certainly have great influences on its expansion strategy. So, before we go to analyse the investment climate of China and its strategic considerations in the investment projects, it is better for us to have some ideas about Shell's present business activities first.

Company Background

Shell Hong Kong Company Limited is one of about 300 operating companies of the Royal Dutch/Shell Group of Companies. It is incorporated in HK on 1 January 1988 to manage all of Shell's business activities and installations in HK. Previously, Shell's Hong Kong business was managed by a UK incorporated company called the Shell Company of Hong Kong Limited.

Shell Hong Kong limited is one of four companies know collectively as "The Shell Companies in China and Hong Kong" (SCCHK). The other companies are Shell Developments (H.K.) Limited, which looks after Shell's interests in its joint-venture installations in China and develops other new business activities; Shell China Limited, which maintains a Beijing liaison office; and Shell Exploration (China) Limited. The shares of these companies are jointly owned by Royal Dutch Petroleum Company and The Shell Transport and Trading Company.

Shell's HK Business Activities

Shell is the market leader in oil products in Hong Kong. It operates the largest network of retail filling and service stations in HK. Shell has two depots in HK: one in Kwun Tong and another in Ap Lei Chau. Kwun Tong has storage tanks and distribution facilities for the entire range of Shell products available in HK, whereas Ap Lei Chau was built primarily to service HK Electric Company's oil-fired power station on Hong Kong Island.

However, Shell is now planning to move all of its HK operations to a new installation at Tsing Yi. When Tsing Yi is completed it will be one of the most modern Shell oil and chemicals storage and distribution facilities in the world. It is expected to be fully operational by 1992.

The first section of Tsing Yi to come into operation will be the LPG storage and distribution plant. It is still studying whether a lubricating oil blending plant should be built in Tsing Yi, which will be discussed in this paper later.

Business Activities in China

Shell has been very active in China. It has already started its business in China since 1960 in marine bunkering and lubricants sales. Following China's open-door policy, Shell Developments (H.K.) Limited was incorporated in Hong Kong in 1976 to develop joint ventures and other business with China. A few years later Shell China Limited, with a Beijing liaison office, and Shell Exploration (China) limited, were also set up.

In 1985, Shell opened its first joint venture, Hua Ying in Shekou, Shenzhen Special Economic Zone (SEZ). A second joint venture also commenced operations at Chiwan in 1987. It is the first depot in any SEZ to have bulk storage facilities for LPG. The depot also supplies a variety of high-quality petroleum products, lubricants and chemicals to consumers and industries both inside and outside the SEZ.

In addition, Shell is involved in a joint venture with Esso China Limited to explore for oil and gas in three contract areas in the South China Sea⁴. By its substantial presence and extensive business in the Mainland China, Shell has

⁴The joint venture has already signed 3 contracts with The National Offshore Oil Corp (CNOOC) concerning offshore oil exploration:

- i) at the 39/11 block in the South China Sea in Nov.1985;
- ii) at the 40/01 block in the South China Sea in Aug.1983;
- iii) at the 04/27 block in the South China Sea in Aug.1983.

already developed strong business relations with China. And there will be even more opportunities for Shell to establish more business in the form of joint venture in China.

New Opportunity in China

In late 1987, Sun started to contact several oil giants to sell out its lubricating oil blending and packaging plant in Shenzhen, which has just been in operational for less than two years. The main reason to sell the Shenzhen plant is its relatively weak market penetration in both Southeast Asia and China which makes it difficult to absorb all the products produced from the plant.

At that time, Shell was just considering the establishment of a similar plant in Tsing Yi. Therefore, Sun Co.'s Shekou plant provided one more opportunity for Shell's expansion plan. Finally, Shell came up with three different alternatives in its expansion plan:

- A₁: to build the plant in Tsing Yi only;
- A₂: to acquire the Shekou plant only;
- A₃: to build the Tsing Yi plant and acquire the Shekou plant at the same time.

In the following chapters, I will analyze the pros and cons of these three alternatives by employing the decision model developed in previous chapter.

Chapter 5

INVESTMENT CLIMATE IN CHINA

China's economic reform has turned some foreign investors' dreams ten years ago into reality. The ever-improving investment environment has attracted more and more investors to pour their money into one of the last unexploited area in the world. The recent austerity programme announced in 1989 National People's Congress was seen by most investors more as a new opportunity than threat since foreign investors, especially for those in hi-tech industries, are not affected by the belt-tightening programme. Investment in Special Economic Zones (SEZ) and the 14 open coastal cities are still growing.

Since the overall investment environment is usually the determining factor for most of the investors to make their investment decisions in China, so in this chapter I will examine some specific opportunities open to Shell if it is to invest in China Sun's plant.

Political Environment

Although political reform had been proposed for several years, China's political and legal systems is still under-developed. The main reason for the setback is the strong opposition from the conservative hardliners. Opinions about political reform are divided among the leaders - the conservatives withhold that status quo should be maintained in China in order to provide a stable environment for economic growth, while the reformists believe that the existing economic reform must accompany with corresponding changes in China's political system.

Today China has a larger degree of toleration to different views, including dissidents' criticism. Yet, power is still concentrated in the hands of a small group of political elites. Deng Xiaoping, who holds the office of the Chairman of the Central Military Commission, is still the paramount leader of China. Some hardliners like Chen Yun and Peng Zhen, though no longer the standing committee members of the Chinese Communist Party (CCP) Politburo now, can still exert considerable influences on China's political arena.

Deng's hand-picked successor, Zhao Ziyang, who is also the CCP Secretary-general, seems that he does not possess the charisma to lure sufficient support from the old cadres. Being widely recognised as a reformist, Mr. Zhao once proposed to separate the function of party and government. But the old cadres showed little support to this proposal. Recently, Mr. Zhao is even being blame for the spiralling inflation and over-heated economy, which have already caused state-wide discontent in China. It is rumoured that Zhao's position as the party's number one man is at stake and the Premier Li Peng, characterised as a

conservative, is going to grab the power from Zhao⁵.

It is quite clear that there is no unity among the leaders. Instead, they are divided into two camps - conservatives, led by hardliners like Chen Yun and Premier Li Peng, and reformists, led by Deng Xiaoping and party Secretary-general Zhao Ziyang. Although Deng is still holding tightly the military power and appears to be the number one man in China, the old cadres have considerable powers to influence Deng's decisions which can be reflected from the event that Deng's right hand man Mr. Hu Yaobang, former party Secretary-general, was forced to resign for being accused of mishandling student riots in 1986.

Nonetheless, voices demanding democracy are growing louder and louder, especially from the intellectuals⁶. Some even openly criticize government policies and Marxism and propose to introduce Western-style democracy into China, which were taboos some years ago. Though the government did try to suppress them, the actions taken are much more moderate compared with Mao's era. There are signs that the Chinese government will be growing more tolerant, enlightened and open-minded, no matter how slow it is.

Perhaps, the present political situations now China experiencing is the most stable one since 1949. But the stability hinge on the health of the 84-year-old

⁵Delfs, Robert. "Politics on Hold." Far Eastern Economic Review, 20 April 1989, p.12.

⁶Rosario, Louise. "Peking Spring Returns." Far Eastern Economic Review, 23 March 1989, p.19.

paramount leader Deng Xiaoping. If he died one day, power reshuffle among the "younger" leaders might cause some degree of instability in China. However, the present economic reform, which is widely supported by the public, is highly unlikely to change in the future. The possibility of China going back to its old road is very low.

Economic Environment

Generally speaking, the Seventh Five-year plan (1986-1990)⁷ adopted at the Fourth Session of the Sixth National People's Congress is the blueprint for China's future economic development. It formed the basis of China's economic policies. In the Seventh Five-year Plan, it included two separate sections which laid out guidelines in relation to foreign investments in the PRC: (1) Use of foreign funds and (2) Import of technology.

(1) Use of foreign funds

During the Seventh Five-year Plan period (1986-1990), China will give priority to the following areas where foreign funds will be used:

(a) energy, communications, telecommunication and new materials, industries, and especially power, port and petroleum projects as well as the technical

⁷Zhao, Ziyang. "Report on the 7th Five-year Plan." Beijing Review 16(1986): 6-8.

"The 7th Five Year Plan of the People's Republic of China for Economic & Social Development (1986-1990)." Beijing Review 17(1986): 2-3.

upgrading of machinery and electronic enterprises which, infrastructural in nature, are expected to provide the necessary backup for the next phase of development of the country's economy; and

(b) the on-going efforts to expand the country's exports to generate more foreign exchange earnings and produce import substitutes, the purpose of which is to create the necessary conditions whereby the country's payment capability will be raised and the scale of foreign fund utilization will be expanded.

It implies that China will continue to absorb direct foreign investment and welcome foreigners and companies to establish joint ventures and coproduction or contractual joint venture enterprises and wholly foreign-owned enterprises on the basis of equality and mutual benefit.

In order to attract more foreign funds, efforts are being made to improve the investment climate. The areas under attention are i) China's law and decrees relating to its foreign business and protect the legitimate rights and interests of foreign investors; ii) infrastructural development; and iii) services and management provided for foreign investors.

In addition, according to the 22-point Provisions issued by the State Council for the Encouragement of Foreign Investment, all SEZs had taken more concrete measures to further attract foreign investment. For instance, the standards for land use fee were reduced or even exempted for some technologically advanced projects. The levels of other charges had also been re-

adjusted, and firm measures were taken to stop the practice of charging unreasonable fees on enterprises involving foreign investment. Meanwhile, efforts were made to simplify the procedure of examination and approval for foreign investment projects. Administrative departments for foreign investment enterprises and foreign investment service centres were set up to help foreign investors with their difficulties, render consulting services and handle matters of appeal.

2) Inflow of foreign technology and talent

Selective and planned import of foreign technology and hiring of foreign talent is an important way to promote the progress of China's science and technology. The priority in technology import will be given to the technical upgrading of existing enterprises and to import of those technologies and equipment which are helpful to increasing the capability of producing more exports and import substitutes.

Apart from attracting foreign funds and importing technology, the above guidelines set in the Seventh Five-year Plan aimed at improving the investment structure. By the end of 1985, we can see that the majority of foreign investments were in "hostels and apartment houses" (Table 1). At the same time, the main source of foreign investments were come from HK (Table 2).Such phenomenon is regarded as extremely "unhealthy" and should be corrected as soon as possible. Therefore, the emphasis is now on diversifying the sources of foreign funds and balancing the area of investment.

Table 1
Orientation of International Investment %
July 1979 - December 1985

Sphere of investment	Equity joint venture	Co-operative joint venture	Wholly-owned foreign investments
Hotels and apartment houses	10	48.5	50
Machinery and electronics	17	2	35
Light industry and textiles	24	5	30
Energy	10	15	
Materials		10	20
Agriculture and husbandry		8	
Services	5	10	5
Total	100	100	100

Although the Seventh Five-year Plan seems to have no direct relation with this case, it is very important to foreign investors as it shows the determination and commitment of the Chinese government to economic reform and its open door policy.

Furthermore, we can tell from the Seventh Five-year plan that the direction of China's economic development will be moving towards hi-tech industries. So, hi-tech industries might have the lowest risk of unfavourable policy changes or

cutbacks. Therefore, the risk involved in investing in a hi-tech lube oils blending and packaging plant is minimal.

Table 2
Breakdown of Sources of Foreign Investments
July 1979 - December 1985

Countries and regions	Input of funds (US\$100 million)	%	Remarks
Hong Kong	41.87	79	ranks first both in investment projects and amount
U.S.A.	4.24	8	ranks second in investment amount and third in investment project
Japan	3.71	7	ranks third in investment amount and second in investment project
Northern and Western Europe	2.12	4	
Asia and Africa	1.06	2	
Total	53	100	

Recent Outlook

Since 1981, China's GNP has been growing at an annual average rate of 9.98%. Basically, the engine of this spectacular growth has been, first agriculture, and later rural industries. From 1978-87, the share of agriculture in total social

output dropped from 22.54% to 20.5%, while the share of construction, commerce and transport grew from 16.5% to 20%. Industry maintained a constant share of 60% for the same period.

The growing wealthier rural areas and SEZs have led to a dramatic increase in demand for consumer durables. The soaring food and consumer durables prices has fuelled China's over-heated economy. The official inflation rate announced in 1988 was around 20%, but some economists estimated that the real figure should be double than that.

Faced with the spiralling inflationary pressure, the Chinese officials announced a series of austerity programmes. It included clampdown on investment, tighter control over money supply and bank credit, restoration of state trading monopolies and fixed price ceilings on steel products, non-ferrous metals and other major industrial raw materials. In a few words, the central government is trying to seize back its control over the economy after several years' economic reform.

Though Premier Li Peng reiterated this belt-tightening policy in this year's National People Congress (NPC)⁸, it met strong opposition from representatives of provincial and municipal government. Guangdong Governor Ye Xueping even openly pleaded for Peking to spare his province from austerity because it relies

⁸Delfs, Robert. "Tighten Your Belts." Far Eastern Economic Review, 30 March 1989, p.10.

on foreign market and raw material, and does not compete for scarce resources at home. It is expected that more such pleas would be heard later. So, whether the central government can hold the grip tightly is still doubtful⁹.

On the other hand, the austerity programme does represent an opportunity to foreign investors since foreign investments are not included in the programme. Moreover, some technology-intensive industries and infrastructural constructions are even encouraged by the central government. So, foreign investments in these categories still can receive the same preferential treatments as before¹⁰.

⁹Rosario, Louise. "Peking's Growing Pains." Far Eastern Economic Review, 5 January 1989, p.54-55.

Rosario, Louise. "The China Syndrome." Far Eastern Economic Review, 6 April 1989, p.76-77.

¹⁰"Rules Concerning Income Taxes & the Unified Industrial & Commercial Tax in China's SEZs, Economic & Technical Development Zones, and 14 Open Coastal Cities." China Newsletter 53:19-20.

Chapter 6

STRATEGIC CONSIDERATIONS OF SHELL'S INVESTMENT

In considering the strategic advantages of the alternatives, we can simplify the question a little bit by just focusing on the strategic advantages of investing in China Sun Oil's plant. Shell's operation in HK has been doing very well and there is no reason for it to move all or part of its business to another place. In the first place, Shell may not be very familiar with doing business in China. In the second place, investment in China has a greater political risk than that in HK. Even worse, due to the proximity of geographical location between HK and Shenzhen, there is virtually no geographical advantage in marketing its products. Then, what are the advantages of buying the Shekou plant?

In this chapter, I have identified three main advantages of China Sun Oil's plant: 1) stable supply of base oils; 2) stronger foothold in China market; and 3) better relationship with Sinopec.

Stable Supply of Base Oils

One of the indispensable ingredients of manufacturing lubricating oils is base oils. High-quality lubricating oils can only be produced from high-quality base

oils. Now, Maoming refinery is supplying high-quality base oils to China Sun Oil. If Shell abandoned the ideas of acquiring China Sun Oil plant, it has to import base oils from various sources like Singapore, Indonesia and Dalien. Both the supply and quality of base oils will be more uncertain and be affected by more external variables.

Meanwhile, base oils from Maoming refinery will be transported via an existing pipeline to a loading terminal at Zhanjiang, and then shipped by coastal tanker to a jetty in front of the China Sun site. Finally, base oils will be transmitted through a one-kilometre pipeline from the jetty to the plant. Therefore, the transportation costs will be lower.

One interesting arrangement is that the Chief Engineer of Maoming Petroleum Industry Corp was appointed to be the vice-presidents of China Sun. It demonstrated Maoming's heavy commitment to the plant. So, it is more certain that both quantity and quality of supply of base oils will be guaranteed.

Stronger Foothold in China Market

Lube oil market in China is becoming more and more competitive. Today Mobil is the market leader in China and its most popular product is Delvac 1130. Shell ranks second after Mobil. Its products are growing to gain greater acceptance from the market. Its best sellers are Rotella SX30 and Shell Super 2000. Caltex has some strength in certain parts of the southern China, but is quite a long way behind Mobil and Shell, while Esso and Castrol are not very

competitive at all in China's lube oil market.

Generally speaking, the competition in China's lube oil market is a positive sum game. The rapid industrial growth in China will demand more lube oils in the future. The question is whether Shell can gain a larger share in this growing market so as to overtake its number one competitor - Mobil.

In fact, one obvious advantage of buying China Sun Oil's plant is that almost all raw materials including ingredients (base oils and additives) and packages are allowed to import duty-free for blending and filling. All finished lubes are able to go out of the economic zone duty free for all subsequent distribution to the rest of China. At present, all lube importers are required to pay heavy import tax. Therefore, lubes produced from China Sun Oil plant will be far more competitive than others in the marketplace.

Secondly, the quality of products produced from the plant is quite satisfactory. The plant possesses a well-equipped laboratory for quality control and manufacturing process testing. In addition, the laboratory has research facilities for new product development.

Moreover, the demand for 4-litre pack of automotive lubes has been mounting high in China. It exerts considerable pressure on Shell to meet the market demand. China Sun Oil plant is incorporated with advanced filling facilities for small packs which in this connection will alleviate somewhat the pressure on its existing plant and provides flexibility to meet ad hoc requirements.

It is worth noting that the competitors are not passive in China. In 1986, Mobil Oil Hong Kong Limited (MOHK) announced the signing of an agreement with China for the supply, blending and packaging of Mobil products at a manufacturing plant in Shanghai. The new agreement was signed between MOHK, Sinopec International and Shanghai Gao-qiao Petrochemical International Trade Company. It is expected that the plant will be fully operational by the end of 1990. Then, it will be a new threat to Shell's position in China's lubes market.

Better Relationship with Sinopec

If Shell is really going to invest in China Sun Oil plant, then the relationship with Sinopec will be promoted. In fact, Shell can enjoy a lot of intangible benefits from this relationship. First of all, Sinopec's extensive connection with various government departments and officials can avoid most of the bureaucratic red tape. Shell can save time and resources in dealing with the bureaucrats. Moreover, it is almost certain that Sinopec will be more eager to get all products from the plant sold to the market.

On the other hand, not only can Shell gain a more competitive position in lubes market, but also in offshore oil exploration. In 1985 and 1986, Shell won two offshore oil exploration and development contracts in the South China Sea. With China's determination to increase crude oil output, there will be more opportunities in oil exploration and development in the future. Perhaps,

better relationship with Sinopec might make Shell has upper-hand over its competitors in contract bidding.

In fact, the expansion capacity of Shell's Tsing Yi plant is very limited. In particular, the rapid urbanization of HK has already gradually turned Tsing Yi into a densely populated residential area. It is not appropriate nor acceptable to further expand its Tsing Yi plant in the future. Furthermore, if Shell intended to develop the larger South East Asia market, the Shekou plant would be a very good opportunity for it to expand its production capacity.

However, there also exists disadvantages in acquiring the Shekou plant. Firstly, profits earned from the plant have to share with the Chinese partner. So, Shell will earn less profit than running the plant by itself.

Secondly, difference in management approach may create disputes between joint venture partners in the future. The pace of decision making will also be hindered by the red tape. Finally, it is possible that Shell's overseas market will be exploited by the joint venture partner once the plant fully loaded.

However, according to my analysis about the investment climate and strategic advantages of PRC investment, it seems that the advantages outweigh the disadvantages involved in investing in Sun Oil plant.

Since the above analysis is just a qualitative one, it is very difficult, if not impossible, to quantify the advantages and disadvantages so as to come up with

an objective standard of measurement. Different investors will place different weights on the same factors. The final decision is a matter of personal judgement.

In this connection, I will perform a quantitative analysis of the investment project itself to see whether it can bring tangible economic values to the company or not.

Chapter 7

QUANTITATIVE ANALYSIS OF THE INVESTMENT ALTERNATIVES

Some people may akin making an investment decision in PRC to putting money in Las Vegas Casino - you may either earn a lot or lose everything you have in one day. Although this analogy has exaggerated the reality, to a certain extent it reflects the attitude of investors towards PRC investment.

For the risky nature of PRC investment, a comprehensive evaluation about the project is essential. In this chapter, I will evaluate the respective economic benefits of the three alternatives by the Discounted Cash Flow (DCF) method. Of course, these quantitative economic analysis of the investment project is not sufficient, we should also take strategic considerations and the overall investment climate of China into account before we make the final decision.

Discounted Cash Flow Method

Basically, the three alternatives are mutually exclusive. Shell must decide which one of the three alternatives is the best to the company. Generally speaking, the one which can generate the highest value to the company is the best alternative. But, how to calculate the value of these investment projects?

Some people may employ the Payback Method by simply adding up the cash generated from the investment project to see how long it will take to cover the capital investment. The one with the shortest payback period will be chosen. However, it has the disadvantages of ignoring the time value of money and the cash generated after the payback period. The investment of Shell is a relatively long-term one, so the time value of cash generated from the investment is a very important consideration. This implies we should discount the cash generated from these investment projects to present value in order to have the same basis of comparison. Therefore, we employ the DCF method to evaluate these alternatives.

Since the real situation of the investment project is very complicated, so it is impossible nor desirable to incorporate everything into our model of analysis. In this connection, we need to make some simplified assumptions to allow the more relevant parameters stand out on the one hand, and to make the model have greater generalization power on the other.

Assumptions

- 1) Component costs are the same for different alternatives

Although lube-oil production is a hi-tech industry, the underlying theory is quite simple. Basically, it is a process of combining "base oils" with "additives" to form the final products - lube oils. By using different type of base oils or additives, or different composition of base oils and additives will then generate

different type of lube oils.

It requires technologically advanced equipment to maintain a high degree of precision of the composition of base oils and additives throughout the whole manufacturing process.

The supply of base oils will be mainly from Dalian if Shell decides to build the plant in Tsing Yi. The prices of base oils from Dalian and Maoming are not expected to differ too much. Whereas the supply of additives will be from the UK no matter which alternatives Shell will finally choose. So, we can assume that the component costs are the same for all of the three alternatives.

According to lubeoil production experts of Shell, the estimated component costs are as follows:

Base oil costs	: HK\$1,755/tonne
Additives costs	: HK\$1,090/tonne
Finished lubeoil costs:	HK\$3,900/tonne

2) Distribution cost is the same for different alternatives

It is obvious that the distribution cost will be different for plants in different location. However, due to the geographical proximity of Shekou and Tsing Yi, we may assume that there is no significant differences in distribution cost between Shekou plant and Tsing Yi plant.

3) No significant discrepancy between estimated and actual demand

The projected demands in both China and HK are estimated by a market research and analysis team of Shell on the basis of the past performance, consumption pattern, market shares and future economic development of HK and China. It is a very complicated calculation which is out of the scope of this paper. Here, I will just take the estimated data of projected demand from Shell for the calculation of cash flow later.

4) Both local and international inflation rate are zero

In other words, all cash flow are deflated to 1989's monetary value so that we can use one discount rate for all periods.

Parameters

The DCF model consists of a number of parameters. These parameters which take different values under different situations formed the basis of our analysis. Since the estimation of the values of parameters requires strong technical background and experience in lube blending industry, so I will not discuss it in this paper. I will just apply the data from Shell to the DCF model directly.

1) Taxation rate

The tax rate depends on the country where the plant is located. If Shell acquire the Shekou plant, then according to the preferential treatment to joint venture in SEZs the tax rate is 7.5% in the first ten years and 15% in the following years.

There is no such preferential treatment in HK. The tax rate is totally determined by the government. According to the past track record, the tax rate in HK always lies between 15-17%. So, it is quite reasonable to assume that the tax rate is 16% in my analysis.

2) Average lube oil value

According to the Marketing Director of Shell, the types of lube oils that will produced in Shekou plant will be different from those in Tsing Yi plant for strategic reasons, so the average value of output will vary slightly.

Table 3

Average value of output

Alternative	HK\$/tonne
1 (Tsing Yi)	440
2 (Shekou)	415
3 (Tsing Yi) (Shekou)	560 620

In addition, outputs from A_1 and A_2 are required to serve both Hong Kong

and China markets. So, part of the outputs from A_1 (A_2) must be exported to China (Hong Kong). Thus, the import duties, which is partly borne by the company, will lower the average value of outputs. On the contrary, plants in A_3 are designed to serve local markets only so that import/export can be avoided. This explains why the average value of output in A_3 is higher than that in A_1 and A_2 .

3) Plant throughput

It is estimated on the basis of the projected future demand of lube oils in China and HK.

Table 4

Plant Throughput (metric tons per annum)

Alt. \ Year	1990	1991	1992	1993	1994-2000
1 (Tsing Yi)	41,022	43,256	46,418	51,324	54,918
2 (Shekou)	41,022	43,256	46,418	51,324	54,918
3 (Tsing Yi)	23,400	23,627	24,404	25,575	26,420
(Shekou)	17,622	19,629	22,014	25,749	28,498

4)Capital expenditure

Table 5

	Capital Expenditure (million HK\$)
Alt.1	101.4
Alt.2	74.1
Alt.3	66.3 (Tsing Yi)
	58.5 (Shekou)

For A_1 , the HK\$101.4 million capital expenditure is mainly used for the construction of the Tsing Yi plant (which included installation of equipments and facilities). Due to the higher material and labour costs in Hong Kong, the capital expenditure is the highest among the three alternatives.

The capital expenditure of A_2 is divided into two parts: 1) to acquire the Shekou plant; and 2) to expand the capacity of the Shekou plant. Since the original plant capacity is only about 50,000 mtpa, which is a little bit lower than Shell's required capacity of 55,000 mtpa, so additional investment is needed to expand the plant to the required level of capacity. This explains why the capital expenditure in A_2 (HK\$74.1 million) is higher than that of A_3 's Shekou plant (HK\$58.5 million).

For A_3 , the capital expenditure is simply to construct the Tsing Yi plant and to acquire Shekou plant respectively.

5) Operating expenses (million HK\$)

Table 6

Alternative 1 (Tsing Yi plant only)

Year	1990	1991	1992	1993	1994-2000
Personnel					
Office	0.40	0.40	0.40	0.40	0.40
Blending	0.30	0.30	0.30	0.30	0.30
Filling	1.20	1.20	1.20	1.20	1.20
Others	0.10	0.10	0.10	0.10	0.10
Total Labour costs	2.00	2.00	2.00	2.00	2.00
Utilities					
Air	0.07	0.07	0.07	0.07	0.07
Electricity	0.07	0.07	0.07	0.07	0.07
Steam	0.35	0.35	0.35	0.35	0.35
Others	0.00	0.00	0.00	0.00	0.00
Total Utility Cost	0.48	0.48	0.48	0.48	0.48
Land Rental	0.00	0.00	0.00	0.00	0.00
Lab. Services	0.38	0.38	0.38	0.38	0.38
Maintenance	1.00	1.00	1.00	1.00	1.00
Losses	0.08	0.08	0.09	0.10	0.10
Other OpCosts	0.20	0.25	0.25	0.25	0.25
Total OpCosts	4.15	5.22	5.23	5.24	5.24

Table 7
Alternative 2 (Shekou plant only)

Year		1990	1991	1992	1993	1994-2000
Personnel						
	No.					
Office	10	0.20	0.20	0.20	0.20	0.20
Moulding	10	0.00	0.20	0.20	0.20	0.20
Blending	10	0.20	0.20	0.20	0.20	0.20
Filling	24	0.48	0.48	0.48	0.48	0.48
Others	6	0.12	0.12	0.12	0.12	0.12
Total Labour costs		1.00	1.20	1.20	1.20	1.20
Utilities						
Air		0.07	0.07	0.07	0.07	0.07
Electricity		0.08	0.08	0.08	0.08	0.08
Steam		0.33	0.33	0.33	0.33	0.33
Others		0.00	0.00	0.00	0.00	0.00
Total Utility Cost		0.47	0.47	0.47	0.47	0.47
Land Rental		1.20	1.20	1.20	1.20	1.20
Lab. Services		0.38	0.38	0.38	0.38	0.38
Maintenance		0.70	1.50	1.50	1.50	1.50
Losses		0.08	0.08	0.09	0.10	0.11
Other OpCosts		0.19	0.24	0.24	0.24	0.24
Total OpCosts		4.06	5.05	5.06	5.07	5.08

Table 8
Alternative 3 (Tsing Yi plant)

Year		1990	1991	1992	1993	1994-2000
Personnel						
	No.					
Office	6	0.30	0.30	0.30	0.30	0.30
Blending	6	0.30	0.30	0.30	0.30	0.30
Filling	14	0.70	0.70	0.70	0.70	0.70
Others	2	0.10	0.10	0.10	0.10	0.10
Total Labour costs		1.40	1.40	1.40	1.40	1.40
Utilities						
Air		0.03	0.03	0.03	0.03	0.03
Electricity		0.04	0.04	0.04	0.04	0.04
Steam		0.26	0.26	0.26	0.26	0.26
Others		0.00	0.00	0.00	0.00	0.00
Total Utility Cost		0.33	0.33	0.33	0.33	0.33
Land Rental		0.00	0.00	0.00	0.00	0.00
Lab. Services		0.23	0.23	0.23	0.23	0.23
Maintenance		0.70	1.30	1.30	1.30	1.30
Losses		0.05	0.05	0.05	0.05	0.05
Other OpCosts		0.13	0.17	0.17	0.17	0.17
Total OpCosts		2.80	3.50	3.50	3.50	3.50

Table 9
Operating cost - Alternative 3 (Shekou plant)

Year		1990	1991	1992	1993	1994-2000
Personnel						
	No.					
Office	8	0.16	0.16	0.16	0.16	0.16
Moulding	6	0.00	0.12	0.12	0.12	0.12
Blending	10	0.20	0.20	0.20	0.20	0.20
Filling	18	0.36	0.36	0.36	0.36	0.36
Others	6	0.12	0.12	0.12	0.12	0.12
Total Labour costs		0.84	0.96	0.96	0.96	0.96
Utilities						
Air		0.03	0.03	0.03	0.03	0.03
Electricity		0.04	0.04	0.04	0.04	0.04
Steam		0.26	0.26	0.26	0.26	0.26
Others		0.00	0.00	0.00	0.00	0.00
Total Utility Cost		0.33	0.33	0.33	0.33	0.33
Land Rental		0.88	0.88	0.88	0.88	0.88
Lab. Services		0.23	0.23	0.23	0.23	0.23
Maintenance		0.60	1.20	1.20	1.20	1.20
Losses		0.03	0.04	0.04	0.05	0.06
Other OpCosts		0.14	0.18	0.18	0.18	0.18
Total OpCosts		3.04	3.79	3.79	3.80	3.81

6) Working capital

The following parameters are estimated according to the past experience of the company

Inventory

	HK\$/mt	Days stock
Unit base oil cost	1,755	15
Unit additive cost	1,090	28
Unit finished product cost	3,900	10

The inventory can be calculated by the formula:

$$\text{Inventory} = \text{Unit cost} \times \text{plant throughput per year} \times \text{Days stock} / 365$$

Table 10

Inventory (million HK\$)

Year		1990	1991	1992	1993	1994-2000
Inventory						
Alt.1 / Alt.2	Base oil	2.96	3.12	3.35	3.70	3.96
	Additive	3.43	3.62	3.88	4.29	4.59
	Fin'd pd.	4.38	4.62	4.96	5.48	5.87
Alt.3 (Tsing Yi)	Base oil	1.69	1.70	1.76	1.84	1.91
	Additive	1.96	1.98	2.04	2.14	2.21
	Fin'd pd.	2.50	2.52	2.61	2.73	2.82
Alt.3 (Shekou)	Base oil	1.27	1.42	1.59	1.86	2.06
	Additive	1.47	1.64	1.84	2.15	2.38
	Fin'd pd.	1.88	2.10	2.35	2.75	3.04

Account receivable

	HK\$/mt	days
Unit proceeds/tonne	3,900	14

By employing similar formula as above, we obtain

Table 11

Account receivable (million HK\$)

Year	1990	1991	1992	1993	1994-2000
Alt.1/Alt.2	6.14	6.47	6.94	7.68	8.22
Alt.3 (Tsing Yi)	3.50	3.53	3.65	3.83	3.95
(Shekou)	2.64	2.94	3.29	3.85	4.26

Account payable

	HK\$/mt	days
Unit base oil cost	1,755	15
Unit additive cost	1,090	28

By employing similar formula as above, we obtain

Table 12

Account payable (million HK\$)

Year		1990	1991	1992	1993	1994-2000
Alt.1/ Alt.2	Base oil	2.96	3.12	3.30	3.70	3.96
	Additive	3.43	3.62	3.88	4.29	4.59
Alt.3 (Tsing YI)	Base oil	1.69	1.70	1.76	1.84	1.91
	Additive	1.96	1.98	2.04	2.14	2.21
(Shekou)	Base oil	1.27	1.42	1.59	1.86	2.06
	Additive	1.47	1.64	1.84	2.15	2.38

RESULTS

Putting all the values of parameter into the DCF model, we obtain a stream of cash flow for each alternative. Then we can calculate the net present value and internal rate of return of these alternatives. The results are summarised in the following exhibits and tables.

Table 13

Net Present Value (million HK\$)¹¹

Alt. Discount rate	A ₁	A ₂	A ₃
0.02	52.56	70.16	55.90
0.04	33.08	51.44	37.28
0.06	17.26	36.17	22.09
0.08	4.36	23.67	9.65
0.10	-6.21	13.38	-0.58
0.12	-14.89	4.88	-9.03
0.14	-22.03	-2.18	-16.02
0.16	-27.94	-8.05	-21.83
0.18	-32.82	-12.94	-26.66
0.20	-36.86	-17.04	-30.68

Table 14

Internal Rate of Return

	Internal rate of return
A ₁	9%
A ₂	13%
A ₃	10%

According to the Lubricant Manager of Shell, the required rate of return for investment in Hong Kong and China are 15% and 18% respectively. The higher required rate of return for China investment is due to the higher political and economic risks involved. Assuming the average inflation rate to be 6-7%, it implies that the required rates of return for investment in Hong Kong and China in my analysis, where inflation rate is assumed to be zero, are 8-9% and 11-12% respectively. Therefore, all of the three alternatives are acceptable by this

¹¹In fact, cash flows of Tsing Yi plant is being over-estimated since rental value of land is not included in my calculation. Although Shell owns the Tsing Yi plant-site, we should take the "opportunity cost" of the land into account. Therefore, cash flows of A₁ and A₃ are overestimated. However, it does not affect our conclusion since A₂ is still the most attractive alternative after all.

standard.

It is obvious that the Alternative 2 has the highest economic value to Shell. Both the NPV and IRR are the highest among the three alternatives. Coupled with the favourable investment climate and valuable strategic advantages it brings, to acquire the Shekou plant seems to be a sensible choice.

Actually, there are so many such "profitable" investment projects in China. but we can see a lot of investors still hesitate to put their money in China. What is the reason?

In fact, there are some "hidden costs" still have not been taken into account in the above analysis. Usually, these hidden costs appear in a joint venture as problems in management and operation. Most of the joint ventures fail because of management and operational problems.

If we trace back to the reason of failure, we will find that lack of mutual understanding between partners is the root cause. The two sides always tend to restrict their thinking in their original framework. Even if they are using the same word, the meaning is quite different due to ideology and cultural differences. Just after they entered a "satisfactory" contract, they would find that problems come out from the most trivial areas.

Therefore, in order to make the deal to be a successful one we should minimize the hidden costs through the contract terms. Given the favourable

investment environment in China whether the investor can successfully fight for terms and condition favourable to the company on the negotiation table is critical to investor's decision. In the next chapter, I'll try to the "ideal terms" Shell should aims at and the "bottom-lines" that the company should make no concession under any circumstances.

Chapter 8

KEY FACTORS FOR SHEKOU JOINT VENTURE AGREEMENT

Although Alternative 2 seems to be very attractive and profitable from our previous analysis, it does not mean that Shell can immediately enter a joint venture agreement with Sinopec. In fact, there are some very important but subtle factors need to be considered before signing the contract. The negotiation will be between three parties: Shell, Sun Oil and Sinopec. Shell should have a very clear idea about its "bottom-line" in the process of negotiation.

Ideal Joint Venture Agreement

The following suggested terms and conditions which should ideally included in the joint venture agreement are totally from the viewpoint of Shell. Perhaps, Shell may need to make some concession so as to reach a mutually beneficial agreement. Nonetheless, it is the target Shell should aim at.

a) The plant should be completely managed by Shell

In China, the most common problem faced by joint ventures is dispute over management style. Due to the differences in culture and ideology, mutual

understanding between the two parties is minimal. In fact, the reason why Sun want to sell its share is mainly because of management problems. So, the quickest way to solve the problem is to allow one side to take over the company's management completely.

However, it is very likely that Shell cannot achieve this target. If it is the case, then the agreement should clearly write down the authorities, responsibilities and duties of both sides.

b) Limit the joint venture to processing deal only

It implies that selling and marketing of products should be handled by Shell. The purpose is just to maximize Shell's benefit in the deal since only the "processing margin" will be shared between the two parties, while Shell can retain the whole "marketing margin"¹².

c) Free to purchase base oils from any source

The joint venture should have the freedom to choose the supplier if Maoming's base oils cannot live up to the required standard.

d) Replace Sun Oil completely

¹²The previous calculation of NPV has already taken the "marketing margin" into account. That means I assume that marketing margin is shared between Shell and Sinopec.

Sun Oil should completely withdraw from the joint venture after Shell had taken over its share. All lubes should also sell under Shell's brand name.

Factors Where Shell should be Firm

Of course, in the above suggested joint agreement, some degree of flexibility should be allowed in negotiations. However, there are two aspects that Shell should not make concession under any circumstances.

a) Direct competition from Sinopec is not allowed in overseas market

Since Shell has substantial involvement in south East Asian market, the lower cost lubes from the Shekou plant would hamper Shell's share in these markets if direct competition is allowed.

b) Share marketing margin with Sun Oil is not acceptable

Sun Oil may require Shell to share marketing margin with it for Sun has already develop some distribution channels for China Sun Oil in some marketplaces. But it is totally unacceptable. Since it will not only reduce Shell profits, but also will leak business confidentiality to Sun. Perhaps, a better way is to pay Sun Oil once-all in the form of "goodwill" in acquiring its share.

Of course, the above suggested conditions of agreement are not exhaustive.

In actual negotiation, there are even more factors needed to be considered. The above suggestions are just trying to list out the most important factors in considering a joint venture agreement.

Chapter 9

CONCLUSION

According to the top executives of Shell and Sun, we find that they share the same analysis in making their investment decision in China:

- 1) evaluate the investment climate of the PRC;
- 2) consider the strategic advantages;
- 3) analyze the financial benefits of the investment projects;
- 4) consider all possible practical operational problems in the investment.

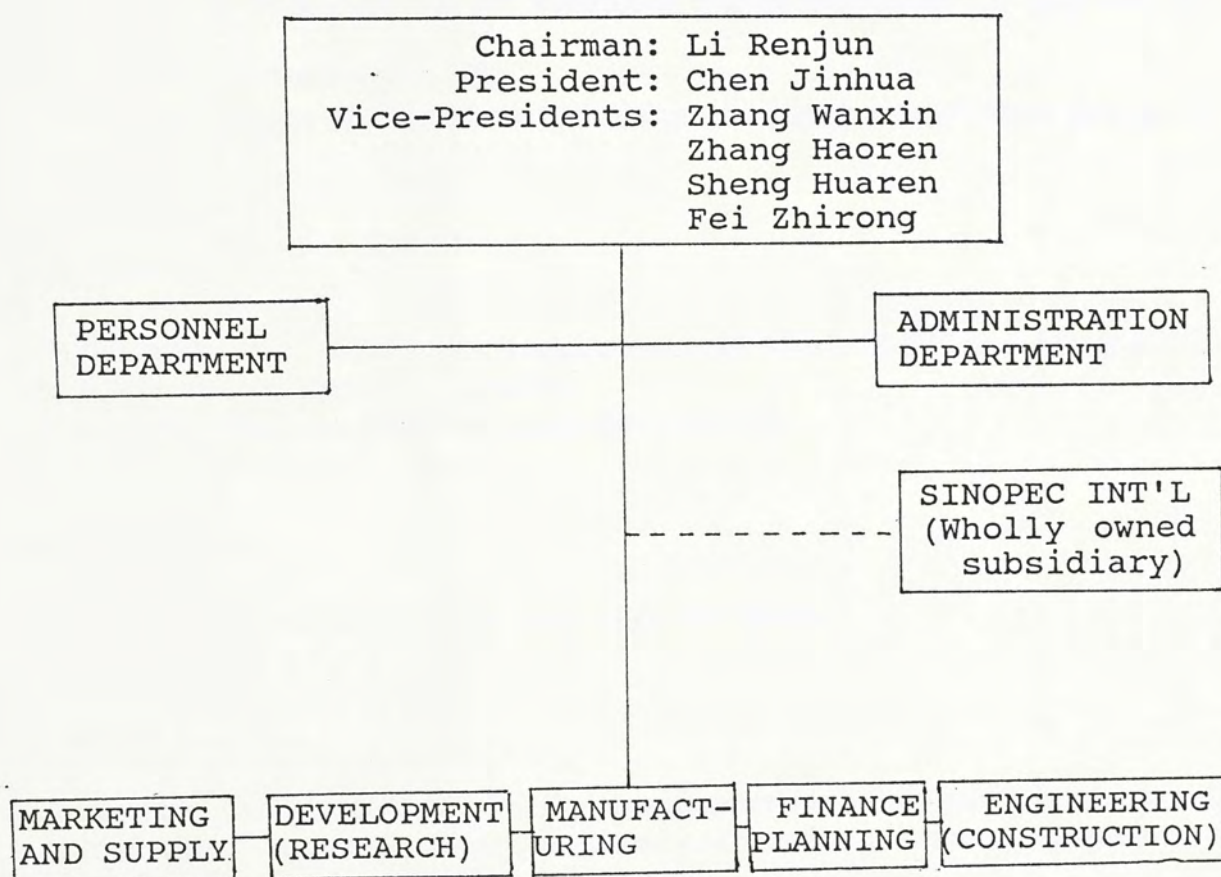
According to this framework of analysis, I find that the most attractive investment alternative is A2 (acquire the Shekou plant only). However, in the first 2 stages of our analysis, it depends much on the subjective judgement of the investor's perceived investment climate in China and the value he/she places on the strategic advantages of the investment projects. Undoubtedly, the political risk of investment in the PRC is greater than that in Hong Kong. So, in the first instance, whether Shell will take this investment alternative depends on the risks it is willing to take.

On the other hand, given the favourable investment climate in the PRC and

the enormous economic values the investment project will bring, the most critical consideration for investors in this stage is the contractual terms in the joint venture agreement. He/She should be able to identify the ideal terms and conditions and the bottom-line during negotiation so as to minimize the hidden cost of future operation.

In fact, we can apply this framework of analysis to other PRC investment decision. We can also perform risk analysis by assigning probabilities to every stage of analysis in the decision model so that the investor can have more understanding about the risks involved and the economic value of all investment alternatives. Of course, the final decision will depend on investors' judgement and their willingness to take risks.

Appendix 1

SINOPEC

Appendix 2

China Sun Oil's Products

Engine Oils

- Universal engine oils for gasoline and diesel engines;
- Special gasoline engine oils for maximum engine protection in "stop and go" service;
- High TBN Marine engine oils;
- Two stroke engine oils for motorcycles, outboard engines and other two stroke applications.

Gear Lubricants

- Automotive gear oils meeting requirements of Mil-L-2105C and Mack GOG in single and multigrade viscosities;
- Heavy duty extreme pressure industrial gear oils.

Way Lubricants

- Special lubricants for machine tool ways and slides.

Hydraulic Oils

- Anti-wear hydraulic oils meeting the specifications of all major hydraulic pump manufacturers in a wide variety of viscosity ranges to meet the requirements of virtually all hydraulic systems.

Metalworking Fluids

- Oils and fluids to handle a wide variety of metals - both ferrous and non-ferrous;
- Oils and fluids for a wide variety of machining operations from mild to the most severe;
- Heat Treating Oils.

Machine Lubricating Oils

- A group of high quality, general purpose oils for lubrication of industrial machinery.

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