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<td>University of Hong Kong</td>
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<td>Author(s)</td>
<td>To, Wan-pun; 屠允彬</td>
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ADAPTATION STRATEGIES OF CONTRACTORS
IN RESPONSE TO RECESSION

A DISSERTATION SUBMITTED TO
THE FACULTY OF ARCHITECTURE
IN CANDIDACY FOR THE DEGREE OF
BACHELOR OF SCIENCE IN SURVEYING

DEPARTMENT OF REAL ESTATE AND CONSTRUCTION

BY
TO WAN PUN

HONG KONG
APRIL 2009
DECLARATION

I declare that this dissertation represents my own work, except where due acknowledgement is made, and that it has not been previously included in a thesis, dissertation or report submitted to this University or to any other institution for a degree, diploma or other qualification.

Signed: ______________________________________

Name: ____________ TO WAN PUN ____________

Date: ______________ 7th April, 2009 ____________
ACKNOWLEDGEMENT

I wish to express my deepest gratitude to my supervisor Mr. David J. Yates. Mr. Yates has offered me valuable time, advices and encouragement. Without his kind support and supervision, the research can hardly be completed.

I am grateful to the following interviewees who have offered me assistance and valuable information for the success of this study:

Mr. C. W. Au       Director of Shui On Construction Co. Ltd
Mr. Derrick Pang    Director of Chun Wo Construction & Engineering Co. Ltd
Mr. Alfred Leung    Director of Leighton Contractors (Asia) Ltd

I must also thank my classmates and my friends for their support and care.

Finally, I am indebted to my parents for their unconditional and continuous encouragement, support and care.
ABSTRACT

Stemming from the U.S. subprime mortgage meltdown, Hong Kong, as a free and open economy, has inevitably been affected by the global economic crisis. Hong Kong’s economic performance in 2009 is bound to be severely affected. As the performance of the construction industry is likely to follow suit, Hong Kong contractors have to get ready for another recession cycle. Therefore, it is crucial for contractors to learn from previous experience of survival strategies so as to formulate successful ones that can help them to survive under the sluggish economy.

The objective of this dissertation is to investigate the extent to which strategies adopted by different sizes of contractors is successful to overcome the recession, with a view to making recommendations to contractors for the formulation of successful survival strategies in response to recession.

This dissertation recommends that both large sized and small sized contractors should give strict adherence over concentrating on core business and undertaking smaller projects. Furthermore, taking advantages of abundant resources, large sized contractors can further implement strategies of diversification into construction related businesses and forming joint venture. These strategies are valuable in terms of enhancing clients’ value and capturing the opportunities of large scale infrastructure projects in the coming future respectively. For small sized contractors, since cash flow is important in determining their survival, competitiveness can be maintained by improving relationship with subcontractors and suppliers.
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Adopted by Leighton Contractors (Asia) Ltd

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A. Objective 1: To review the causes of failure of contractors in the UK during times of recession

B. Objective 2: To review the successful strategies adopted by contractors in the UK in response to recession

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INTRODUCTION

1.1 Statement of Problem

The construction industry is one of the main pillars of Hong Kong’s economy. Its importance is recognized in terms of its significant contribution to Hong Kong’s economic and infrastructure development.

In recent times, Hong Kong’s economy has mainly suffered from two recession periods namely Asian financial crisis in 1997-98 and the global downturn in 2001-02. Although the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003 also affected Hong Kong’s economy, there was a solid rise in exports and a boom in tourism from the mainland because of China’s easing of travel restrictions, and a return of consumer confidence resulted in the resumption of strong growth from late 2003 through to 2006.

Shortly after the handover ceremony of Hong Kong to Republic of China in the mid 1997, the Asian Financial struck many of the economies of Southeast Asia. By the end of 1997, most of the Asian currencies had experienced significant losses in value with respect to the U.S. dollar. Thanks to the linked exchange rate system between Hong Kong currencies and U.S. currencies, it insulated Hong Kong from the adverse consequence of a decline in value of Hong Kong currencies. However, followed by a speculative attack on the Hong Kong dollar in August 1998 forcing a de-linking over the current linked exchange rate system, Hong Kong government safeguarded the stability in the financial market by active intervention of the financial market with $15 billion fund injection and an increase in an overnight rate from 8% to 19%.
Though the linked exchange rate could be preserved, the policies forced the Hong Kong’s economy to adjust by prompting a sharp decline in the domestic prices of real estate, stocks, consumer goods as well as major wage cuts. Hong Kong was characterized by a deflationary recession with rising unemployment (Refer to Table 1.1) which marked the beginning of recession for the Hong Kong general economy.

Another set of external shocks struck the Hong Kong economy included ‘dot.com’ speculative bubble burst in Hong Kong Stock Exchange in the mid 2000 which led to a loss in investors’ confidence and terrorist attacks on the World Trade Center and Pentagon in September 11, 2001 which led to a decline in Hong Kong’s tourism industry. Though the Hong Kong economy experienced real economic growth between 2001 and 2003 (Refer to Figure 1.1), domestic prices continued to fall and the unemployment continued to rise. There was a lack of confidence in the Hong Kong business community and a sharp fall in the number of tourists which resulted in the termination of many companies and retail stores.

<table>
<thead>
<tr>
<th>Year</th>
<th>Real GDP Growth</th>
<th>CPI</th>
<th>Unemployment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>5.1%</td>
<td>5.8%</td>
<td>2.2%</td>
</tr>
<tr>
<td>1998</td>
<td>-5.5%</td>
<td>2.8%</td>
<td>4.7%</td>
</tr>
<tr>
<td>1999</td>
<td>4.0%</td>
<td>-4.0%</td>
<td>6.2%</td>
</tr>
<tr>
<td>2000</td>
<td>10.0%</td>
<td>-3.8%</td>
<td>4.9%</td>
</tr>
<tr>
<td>2001</td>
<td>0.6%</td>
<td>-1.6%</td>
<td>5.1%</td>
</tr>
<tr>
<td>2002</td>
<td>1.8%</td>
<td>-3.0%</td>
<td>7.3%</td>
</tr>
<tr>
<td>2003</td>
<td>3.2%</td>
<td>-2.6%</td>
<td>7.9%</td>
</tr>
</tbody>
</table>

Table 1.1: Hong Kong’s Recession, 1997-2003

Source: Census and Statistics Department, HKSAR
In 2003, Hong Kong was struck by the outbreak of severe Acute Respiratory Syndrome (SARS). Between November 2002 and July 2003, 299 people died of SARS were recorded. Its impacts on the economy were two-folded. Firstly, it significantly reduced tourism. Secondly, private consumption greatly declined as Hong Kong residents feared of being infected by the diseases. As a result, many businesses in Hong Kong such as restaurants, hotels, retail stores experienced a sharp decline in revenues. However, the Hong Kong general economy was able to experience growth in the late July immediately and thereby the impact of the SARS on the economy was minimal.

On July 28, 2003, the Chinese government announced a new travel policy for mainland residents visiting Hong Kong, namely Individual Visit Scheme (IVS) which allowed the tourists to obtain a seven-day visa to Hong Kong subject to the approval China’s Public Security Bureau. Between 2001 and 2006, the annual number of visitors, including business travelers and tourists, increased from 4.4
million to 13.6 million people. Following the end of SARS outbreak and the introduction of the IVS, Hong Kong’s economic had experienced several years of strong economic growth (Refer to Table 1.2). Hong Kong’s real GDP grew at rates comparable to its last expansionary period before the handover. Furthermore, Hong Kong’s usually high unemployment rate, with peaking at 7.9% in 2003 started a gradual decline of about 1% per year. As the economy recovered starting from the late 2003, it can be concluded that the recession period for the Hong Kong general economy covers the period between 1998 and 2003.

<table>
<thead>
<tr>
<th>Year</th>
<th>Real GDP Growth</th>
<th>CPI</th>
<th>Unemployment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>3.2%</td>
<td>-2.6%</td>
<td>7.9%</td>
</tr>
<tr>
<td>2004</td>
<td>8.6%</td>
<td>-0.4%</td>
<td>6.8%</td>
</tr>
<tr>
<td>2005</td>
<td>7.5%</td>
<td>1.0%</td>
<td>5.6%</td>
</tr>
<tr>
<td>2006</td>
<td>6.9%</td>
<td>2.0%</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

Table 1.2: Hong Kong’s Economic Recovery, 2003-2006

Source: Census and Statistics Department, HKSAR

The Hong Kong construction market can be broadly classified into four sectors: i) residential building; ii) non-residential building construction; iii) civil engineering and iv) repair and maintenance. Gross construction output volume reached a peak in 1998 and since then, the total construction volume for the four sectors in Hong Kong has been declining (Refer to Figure 1.2). The reason for a slump in the construction output can be attributed to the decline in large-scale public infrastructure projects immediately after the completion of the Airport Core Program (the new airport and related infrastructure projects) in 1998 and private developers’ cutback in residential developments after the property market crash towards the end of 1998 due to the
aftermath of the Asian financial crisis. Worse still, in the first quarter of 2001, the Government’s official abandonment of the 85,000 flat housing supply formulated in 2000 led to an even slower public housing construction.

![Figure 1.2: Quarterly Gross Value of HK’s Construction Work at Constant (2000) Market Prices (1983Q1- 2006Q4)](chart)

Source: Report on the Quarter Survey of Construction Output, C& SD, HKSAR

Notes:  
- Private sector includes projects commissioned by private developers. Projects under the Private Sector Participation Scheme are also included.

- Public sector includes projects commissioned by the Government of the HKSAR, Mass Transit Railway Corporation, Kowloon- Canton Railway Corporation and Airport Authority. Projects under the Home Ownership Scheme commissioned by the Housing Authority are also included.

- Construction works at location other than site include decoration, repair and maintenance and construction work at minor work locations such as site investigation, demolition, structural alteration and addition work, and special trades such as carpentry, electrical and mechanical fitting, plumbing and gas work.
For the economy in the Hong Kong construction industry, after discounting price changes, the gross value of construction work in 2006 shrank to $96 billion at constant (2000) prices, which was only 64.7% of the peak valued at $139 billion (Refer to Table 1.3). Construction site works, both the public and private projects, followed a declining pattern in the last few years as the public housing programme was scaled back and there were few large-scale infrastructure projects, private building projects and private building developments.


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</tr>
</thead>
<tbody>
<tr>
<td>Residential (A)</td>
<td>27,816</td>
<td>32,082</td>
<td>38,525</td>
<td>45,550</td>
<td>49,656</td>
<td>48,703</td>
<td>38,967</td>
<td>36,895</td>
<td>31,723</td>
<td>23,509</td>
<td>20,089</td>
<td>18,086</td>
</tr>
<tr>
<td>Non-residential (B)</td>
<td>24,688</td>
<td>27,302</td>
<td>33,454</td>
<td>31,161</td>
<td>17,844</td>
<td>15,395</td>
<td>15,199</td>
<td>17,216</td>
<td>20,597</td>
<td>20,555</td>
<td>19,990</td>
<td>16,666</td>
</tr>
<tr>
<td>Civil Engineering (C)</td>
<td>47,735</td>
<td>50,014</td>
<td>38,871</td>
<td>23,216</td>
<td>18,348</td>
<td>21,427</td>
<td>25,068</td>
<td>21,760</td>
<td>20,764</td>
<td>18,595</td>
<td>14,118</td>
<td>11,858</td>
</tr>
<tr>
<td>Total Construction Investment (A+B+C)</td>
<td>100,239</td>
<td>110,118</td>
<td>110,950</td>
<td>99,936</td>
<td>85,848</td>
<td>82,525</td>
<td>79,224</td>
<td>75,871</td>
<td>73,083</td>
<td>62,659</td>
<td>54,197</td>
<td>46,010</td>
</tr>
<tr>
<td>Repair and Maintenance (D)</td>
<td>20,012</td>
<td>30,524</td>
<td>31,382</td>
<td>29,086</td>
<td>33,301</td>
<td>32,166</td>
<td>32,161</td>
<td>32,806</td>
<td>31,102</td>
<td>38,017</td>
<td>44,077</td>
<td>49,080</td>
</tr>
<tr>
<td>Total Construction Market (A+B+C+D)</td>
<td>123,251</td>
<td>140,642</td>
<td>142,332</td>
<td>129,022</td>
<td>119,149</td>
<td>111,691</td>
<td>111,385</td>
<td>108,676</td>
<td>106,273</td>
<td>100,615</td>
<td>98,275</td>
<td>95,990</td>
</tr>
</tbody>
</table>


To summarize the output by nature of the construction activities at constant (2000) prices from 1995-2006 (Refer to Table 1.3), by comparing the data of 1997 (i.e. the peak) and 2006, observations in terms of the gross value of construction work are concluded as follows:
Total construction market: Dropped by 30.9%
Total residential: Dropped by 53.1%
Total non-residential building: Dropped by 52.0%
Total civil engineering work: Dropped by 69.5%
Total repair and maintenance: Increased by 59.3%

In terms of contribution of Hong Kong’s construction activity to GDP, with a drastic decline of value-added to GDP after 1997 (Refer to Figure 1.3), the construction industry reached the bottom valued at $45.6 billion in 2003. After 2003, the construction industry experienced recovery followed by a fall in the percentage change of value-added to GDP in a decreasing rate in 2004 and 2005 and eventually an increase in the percentage change of value-added to GDP in 2006 (Refer to Table 1.4) due to stable construction workloads after 2003.

![Figure 1.3: Contribution of Hong Kong’s Construction Activity to GDP](source: Report on the Quarter Survey of Construction Output, C& SD, HKSAR)
<table>
<thead>
<tr>
<th>Year</th>
<th>Value- added to GDP</th>
<th>% change in Value- Added to GDP (Compared to Previous Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>46.3b</td>
<td>--</td>
</tr>
<tr>
<td>1995</td>
<td>54.7b</td>
<td>18.1% increase</td>
</tr>
<tr>
<td>1996</td>
<td>65.1b</td>
<td>19.0% increase</td>
</tr>
<tr>
<td>1997</td>
<td>71.7b</td>
<td>10.1% increase</td>
</tr>
<tr>
<td>1998</td>
<td>69.9b</td>
<td>3% decrease</td>
</tr>
<tr>
<td>1999</td>
<td>66.1b</td>
<td>5.0% decrease</td>
</tr>
<tr>
<td>2000</td>
<td>63.2b</td>
<td>4.0% decrease</td>
</tr>
<tr>
<td>2001</td>
<td>58.1b</td>
<td>8.0% decrease</td>
</tr>
<tr>
<td>2002</td>
<td>52.3b</td>
<td>10.0% decrease</td>
</tr>
<tr>
<td>2003</td>
<td>45.6b</td>
<td>12.9% decrease</td>
</tr>
<tr>
<td>2004</td>
<td>40.7b</td>
<td>10.7% decrease</td>
</tr>
<tr>
<td>2005</td>
<td>39.3b</td>
<td>3.4% decrease</td>
</tr>
<tr>
<td>2006</td>
<td>40.0b</td>
<td>1.7% increase</td>
</tr>
</tbody>
</table>

Table 1.4: Percentage Change in Value- Added to GDP (Compared to Previous Year)

Source: Report on the Quarter Survey of Construction Output, C& SD, HKSAR

Another indicator of recession in the construction industry during the period between 1998 and 2002 is the Tender Price Index. According to the Building Works Tender Price Indices (BWTPI) compiled by the Architectural Services Department and Housing Department for public buildings and public housing projects (Refer to Figure 1.4), the tender price index dropped drastically since the peak in 1998 and reached the bottom in 2003 which indicates severe competition due to a drastic fall in construction output. Therefore, judging from the presented evidence of both value
added of construction output to GDP and Tender Price Indices, it is projected that the recession period for the construction industry covers the period between 1998 and 2003, which coincides with the Hong Kong general economy.

![Building Works Tender Price Index (BWTPI), 1996-2008](image)

Figure 1.4: Building Works Tender Price Index (BWTPI), 1996-2008

Source: Architectural Services Department

To respond to the recession, some construction firms adjusted their operational tactics in order to survive in a hostile economic and business environment. Thanks to the rapid economic growth and liberation of markets in Mainland China and Macau, some construction firms were able to grasp the opportunity and capitalize on their expertise in these regions. In this dissertation, the boom effect of Macau to counteract the domestic problem is taken into consideration. The same as Hong Kong, Macau was hit hard by the 1997-98 Asian financial crisis. In 2001, the government decided to abolish the casino industry monopoly, which had been in place for 39 years and casino licenses were offered to other operators. This created a
remarkable economic boom in Macau, powered by foreign investment associated with the expansion of the gaming industry, the growing influx of tourism, especially from China and the construction projects that were necessary to support these developments. As a result, Macau’s annual GDP showed double-digit growth: 10.1% in 2002, 14.2% in 2003, and a sky high 28.6% in 2004. It dropped to 6.7% in 2005 but rebounded to 16.6% in 2006. Therefore, it can be concluded that the Macau boom occurred during the period between 2002 and 2006 which has an implication on Hong Kong contractors to counteract local decline in the construction market from 1998 to 2003 by taking advantage of the expanding Macau construction market.

Recently, Hong Kong has been characterized by a slump in the economy. According to the latest press release from Census and Statistics Department, the growth of the Hong Kong economy has slowed down as a result of global financial downturn. Based on the Hong Kong Economic Report 2008, the U.S. financial turmoil that originated from the subprime mortgage market escalated into a full blown crisis in global financial markets, dealing a severe blow to the already much weakened global economy. As a small open economy and an international financial centre, the Hong Kong economy has been also badly affected and the impact of the global downturn has been increasingly felt on export dependent Asia countries. This scenario suggests that economic recession for Hong Kong is imminent. It follows that the Hong Kong construction industry needs to prepare for a recession in the near future.
1.2 Research Objectives

This dissertation aims to discover the strategies undertaken by different sizes of the contractors in order to survive and adapt to poor construction market conditions in Hong Kong. The objectives are:

1. To review the causes of failure of contractors in the UK during times of recession.
2. To review the successful strategies adopted by contractors in the UK in response to recession.
3. To identify and analyze the causes of failure of contractors in Hong Kong during times of recession.
4. To identify and analyze the successful strategies adopted by contractors in Hong Kong in response to recession.
5. To recommend survival strategies for contractors in Hong Kong in response to the recession.

These findings will be helpful for contractors to formulate appropriate strategies to cope with recession successfully.

1.3 Research Methodology

Objective 1 and 2 are achieved by review of previous research, textbooks, journals, periodicals, newspapers related to the cause of failure and strategies. Lessons are learned from the practice of UK construction industry to provide a fundamental understanding so that research questions can be formulated.

In order to investigate the causes of failure and survival strategies practiced by different sizes of contractors in Hong Kong, both quantitative and qualitative data is
assembled. Data collection is conducted in two phases, including a questionnaire survey and structured interviews.

Initially, a questionnaire survey is sent to both small and large sized contractors in Hong Kong. The participants are targeted at managerial level. Objectives 3 and 4 are achieved by conducting a questionnaire survey. After analysis of the questionnaire result, the similarities and difference between Hong Kong and UK practice are explained. Structured interviews are then conducted with some respondents. In-depth discussion is held to follow up and go into details of the questionnaire results. Other issues to be addressed include the reasons for not implementing certain strategies and possible obstacles for implementation which provides a more in-depth understanding for the choice of survival strategies. By comparing the findings in Hong Kong with those of UK, objective 5 can be achieved to recommend successful strategies for different sizes of contractors in Hong Kong.
CHAPTER TWO
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction to Causes of failure

The construction business has recorded the second highest failure rate among all types of business (Clough and Sears, 2000). Compared with other industries, a contractor is at far more risk than his counterparts (Kangari, 1988). Hong Kong is of no exception and the higher likelihood of business failures in the local construction market underpins this research study.

Understanding the factors leading to business failure can help in the identification of early warnings of impending financial crises. It is important for construction practitioners to predict their company's financial distress as well as providing a clear indication for professionals to deal with and manage risk effectively. This gives rise to an appropriate form of strategy devised by construction firms to avoid insolvency. Therefore, before formulating on appropriate strategy, there is a need to diagnose the causes of failure of contractors during times of recession.

2.2 Definition of Business Failure

There are a number of studies concerned with the definition of business failure. According to Dun and Bradstreet (1991), a business failure is a company that

(i) ceases operation following assignment of bankruptcy

(ii) ceases operation with losses to creditors after such actions as foreclosure or attachment

(iii) voluntarily withdraws leaving unpaid debts
Frederikslust (1978) defined failure as an inability of a firm to pay its obligation as a consequence of a sharp decline in sales, as a result of recession, the loss of an important customer, shortage of new materials and deficiencies of management. Altman (1968) defined failure from an economic perspective in two ways. The first way is that a company is considered to have failed if the realized rate of return on invested capital with allowances for risk considerations is significantly and continually lower than prevailing rates of similar investment. Another way is that the revenue is insufficient to cover costs and situations where the average return on an investment is below the firm’s cost of capital. Other four situations constituting failure consist of the following (Watson and Everett, 1993).

i) discontinuance for any reasons

ii) ceasing to trade and creditor loss

iii) sale to prevent further losses, and

iv) failure to make a go for it

Hrebiniak and Joyce (1985) summarized the failure as a function of two factors- the environment-dependent factor and the strategic leadership dependant factor. Arditi et al. (2000) attributed business failure to budgetary issues, human/organizational issues, capital issues, adaptation to market conditions, business issues, macroeconomic issues and natural factors. Dun and Bradstreet Corporation (1986) identified the major causes of business failures as economic factors, inexperience, poor sales, expense, customer, fraud and neglect, asset and capital and disaster. Amongst all, economic factor is the most significant cause of failure consisting of
sub-factors such as bad profit, high interest rate, loss of market, no customer spending and no future. Therefore, it can be seen that the failure of a business firm is the outcome of a complex process, independent of a single factor. Both environmental forces and managerial decisions are significant in determining the survival of firms.

2.3 Review of Causes of Failure in the UK Construction Industry

The UK construction industry experienced a period of sustained economic growth and prosperity during the 1960s, followed by a major recession from 1973 to 1980 and a recovery period starting from early 1980 onwards (Lansley and Ambrose, 1987). Another recession occurred in the period from 1988 to 1993 (Hillebrandt et al., 1995).

A. The 1970s

Major changes in the business environment in the early 1970s included the three-day working week of 1972, the building strike of 1972, the oil crisis of 1973, the moratorium of public expenditure of 1975 and 1976 as well as the sterling crisis of 1976 (Yisa and Ambrose, 1996). Recession in the construction industry occurred in 1973 which was characterized by a drastic decline in the level of government funding for construction work and shortages in any type of building or physical infrastructure (Lansley and Ambrose, 1987). Hillebrandt (1984) commented that the government expenditure cut in 1973 had a high construction component which was so severe that it was difficult to doubt that the industry was being used as a regulator of the economy. The recession in the 1970s can be made up of two catalysts. During the period between 1973 and 1976, there was a decline in private sector housing. Another decline was shown in public sector orders between 1977 and 1980. Both
trends resulted in a drastic fall in the output of the construction industry during the period between 1973 and 1980. Later, the construction industry was able to overcome the 1970s recession by having another boom in the construction of commercial sector in the early 1980s (Ball and Grille, 2000).

B. The 1980s

It took until 1988 to achieve the level of activity of that of 1973 which revealed that the period of the 1980s marked the recovery of the construction industry. During the 1980s, public sector orders continued at a low absolute level. The worst falls faced by large contractors occurred in civil engineering as a result of cutbacks in the level of expenditure by the public sector. For the total value of overseas work available, there was a deteriorating demand for overseas construction activities which can be seen from a fall from 2,324 million pounds in 1982 to 1,696 million pounds in 1987 (Hillebrandt and Cannon, 1990). Despite the above trends, the UK construction industry was sustained by a boom in private sector housing until 1988 and another startling change in private commercial sector which increased nearly threefold from the late 1970s to mid of the 1980s.

C. The 1990s

There was another recession between 1988 and 1993. The signing of Single European Act such as a sudden tightening of monetary policy and changes in mortgage taxation policy attributed to the collapse in the private sector housing and the commercial building (Hillebrandt et al., 1995). Decline in the house-building sector was characterized by both falling price and output (Ball and Grille, 2000). The consequences were a series of cost reduction and cost control measures such as staff redundancies, lowering of overheads and control over capital expenditure over
new acquisitions which were widely adopted by contractors (Carrillo and Heavey, 2000). The recession had caused a major transformation in the economy accompanied with high unemployment throughout the late 1980s and the early 1990s (Geroski and Gregg, 1993). Therefore the late 1980s and the early 1990s marked the period of recession for the construction industry in UK.

2.4 Lessons Learnt from the Causes of Failure of the UK Construction Industry

A. Reasons for Failure during the 1970s

I) Poor Management of Organizations

According to Dun and Bradstreet’s analysis on underlying causes of contractor’s failure in the UK before 1980s, incompetence served as a major cause of failure. The incompetence was mainly associated with poor management of a contractor’s operation. Schleifer (1987) identified ten common elements of contractor failure in terms of poor operation management including an increase in project size, a change in geographical area of work, poor accounting systems, poor systems of evaluating contractor profitability, a change into an unfamiliar type of construction, replacing key personnel, management maturity, poor equipment cost control, poor billing procedures and poor transition to computerized accounting. Therefore, the main cause of contractor’s failure during 1970s was mainly related to management issues.

According to Hillebrandt (1984), the consequences of poor management can turn a potentially profitable contract into one making a substantial loss on the following grounds.

i) Increase in the cost of materials due to wastage, bad storage, pilfering or lack of care in use

ii) Increase in the cost of labour due to low productivity, poor workmanship and the
need for rectification and the wastage of time between jobs because of inadequate planning of the flow of operation

iii) Increase in the cost of subcontractors due to poor planning which hinders them to start operation on site on time and can generate claims against the main contractor

iv) Increases in the cost of management team on site due to poor labour relations

II) Inflexibility

During the 1970s, there was a transformation of the economy, with some markets disappearing and new ones emerging. Firms had to be prepared to serve a wide range of markets in order to ride out the uncertainties and massive troughs in demand occurring in particular markets. Strategies had to be moved from a focus on one or two particular segments to the market as a whole, generating problems for the contractors associated with how to compete on cost in unfamiliar territory and how to cope with a continually changing mix in the composition of the market. In order to survive in the market, organization has to acquire flexibility and an ability to realign existing resources with changes in demand (Lansley, 1987).

B. Reasons for Failure during the 1980s

I) Fall in Construction Activities

The major contributor to contractors’ failure during 1980s was economic factors. The rate of failure was related to the number of construction activities, loan interest rates, and the number of new businesses entering the construction industry. During the 1980s, it was characterized by a long term downswing in the economic activity such as a low level of demand and a decline in overseas opportunity. It was found that there was a negative correlation between the drop in the construction activities
during the 1980s and the rate of increase in the construction failure rate. This was due to an increasing competition between existing businesses during recession resulted from fewer construction activities, leading to lower profit margins and a higher likelihood of negative profits (Kanagari, 1988).

II) Higher Interest Cost
At that time, the normal practice in UK was that construction relied on loans to commence a project. Borrowing money with lower interest payments could reduce the risk of negative profit on a job. It was found that there was a positive relationship between loan rate and failure rate during the 1980s. A higher interest rate at which companies borrow money could reduce the profitability of construction companies (Kanagari, 1988). The justification is that the construction industry was a project based and capital intensive industry at that time. During recession, the investment capital for the industry was falling due to a high interest rate which resulted in reductions in new contract orders and output, in turn making the construction market more intense. The borrowing cost of capital became high. All these factors made it a difficult time for the construction industry and caused a rise in unemployment, bad debt and bankruptcy to contractors (Ren, 1996).

III) Cash flow Problem
High interest cost was not the only cause of contractor’s failure. Together with a chain of adverse effects such as project delays and late payments which further hurt the cash flow cycle, there was a higher likelihood for failure of contractors, especially to those startup businesses with insufficient level of experience, financial reserves, reputation as well as fewer loyal customers (Kanagari, 1988).
IV) Failure to Meet Client’s Demand

According to Lansley (1987), there was a significant change in client’s attitude to exercise the control of quality at that time. The implication to contractors was that they had to be prepared to adopt innovations and value system in order to contribute to the next prolonged upswing in economic activity and to remain in the business. Failure to meet client’s demands implied that contractors would be expelled from the market.

C. Reasons for Failure during the 1990s

I) Intense Competition

The UK construction industry went through a severe recession in the early 1990s. It was found that there was a positive relationship between mark-ups and the construction cycle and these industry characteristics determined profitability. Low profitability ratio in the early 1990s was attributed to the economic downturn due to more intense competition (Ball et al., 2000). The justification is that excessive competition forced many contractors in the UK to tender at below cost, causing the contractors more susceptible to fluctuation in materials prices under long term contracts which necessitated a drain in cash reserve and a demand for additional sources of finance from bankers and shareholders (Davis, 1999).

II) Cash flow Problem

Cash flow problem was another reason of construction failure during the early 1980s and the late 1990s (Lowe, 1997). Finance of construction industry in the UK was based on interim payment which usually lagged behind progress. Given a combination of delays in payment as well as creditors’ impatience to demand payment from main contractors, cash flow problems arose. To tackle the problem,
more debts could be introduced from banks. However, since most of the contractors were characterized by a highly geared capital structure, it constituted the grounds for rejection of loans from banks. Furthermore, cash flow problems could be caused by contractors’ profit tied up in debtors or work in progress. After taking into account of these issues, there was not much cash remaining to pay the bills. Since construction industry is labour intensive, the wages of the worker must still be paid irrespective of whether the contractor has been paid or not (Davis, 1999). Without adequate working capital to overcome the cash flow difficulties, the insolvency of the contractors was resulted.

III) Poor Financial Control

Another major cause for contractors’ insolvency during the early 1990s in the UK was poor financial control. According to the insolvency practitioners, an absence of proper accounts in the companies for the insolvent contractors’ companies was observed (Davis, 1999). To tackle the problem of poor financial control, there is a need for medium sized contractor to build up formalized financial accounting procedures and financial planning techniques to forecast turnover required to support overhead charges and to review financial performance for individual contracts (Cheetham et al., 1997).

2.5 Review of the Construction Industry in Hong Kong

A. Relationship between Construction Industry and General Economy

Tse and Ganesan (1997) investigated the relationship between GDP and construction output in Hong Kong. They found that there is a positive correlation between GDP and construction output and it is the economy which leads the construction flow. Also, the nature of the construction industry is cyclical because construction
activities follow the level of GDP to adjust its production activity. Another observation is that the volatility of construction activities is higher than that of GDP. Therefore, the performance of the construction industry is affected by the general economy in Hong Kong.

Leung and Wong (2004) found that there is a positive correlation between GDP and public investment in construction as government can make use of construction activities to stimulate the economy. Lower cost of production can be capitalized and in turn stabilizes the economy. The implication is that an expansion in public construction projects is likely to be followed by a recession that may provide opportunities to contractors and allows a higher chance of survival.

**B. Capital Structure of Hong Kong Contractors**

Chiang et al. (2002) stated that the gearing ratio of contractors in Hong Kong is high due to a higher cost of equities. Profitability of contractors is low and highly volatile which requires a higher risk premium in construction stock and constitutes a higher cost of equities. With difficulties in raising equities, it accelerates the risk of bankruptcy for contractors. As far as debt financing is concerned, the cost of borrowing loans is high as banks require a higher interest rate to compensate for the high risk of bankruptcy. Given a lower profitability of contractors, when recession comes, it is difficult for contractors to obtain loans as the cost of equities is even lower.

Chiang et al. (2002) and Chan et al. (2005) investigated contractors’ debt financing in Hong Kong and found that contractors have shown conservative financial management practice by keeping the debt at reasonably low levels. In general, it is
less likely that cause of failure is attributed to an inability to meet interest and principle payment due to a higher level of debt employed in the capital structure.

C. Lending Rate for Construction Loans

Under the linked exchange rate system established between Hong Kong currency and U.S. currency, the prime rate trend in Hong Kong is likely to follow the movement of prime rate in U.S. According to the following figure (Refer to Figure 2.1), it can be seen that a high interest rate was charged when loans were applied in the construction market at the early period of recession between 1998 and 2001 before it experienced a sharp decline after 2001. Therefore, it can be concluded that the contractors suffered from a high interest rate during the recession between 1998 and 2003.

![Figure 2.1: HK and US Prime Rate Movement](image)

Source: Hang Seng Economic Monthly, Hang Seng Bank Ltd

2.6 Rationale for Strategies

The need to adopt a strategic perspective to business operations has been recognized
for a long time in other sectors of the economy. It was evident in the economic and business sectors that strategies shifted from short term and tactical to the long term and strategic level decades ago (Male and Stocks, 1999).

As an external environment can bring different types of pressure to the firm, a rapidly changing environment requires greater corporate awareness of changes and their implications for the organization (Langford and Male, 1991). In the aspect of economic theory, the impact of changes in the business environment on the positions of the companies is illustrated as follows. Despite the theory of perfect competition assuming free access to an industry to new participants and the availability of perfect market information of all within a particular sector, rapid changing business situations enables managers to examine the extent to which they can influence the level of competition within their industry to their advantages and thereby captures abnormal profits (Porter, 1979). Therefore, it is important for construction companies to adopt appropriate strategies that can help them to cope with the external environment. The systematic appraisal of strength and threats in the environment of the organization and matching these to the opportunities and threats in the environment is crucial for determining their survival in the competitive market. Junnonen (1998) demonstrated that it is important to execute strategic thinking for construction organization as a result of the industry’s dramatically changing business environment. Construction activity is subject to influences resulting from environment. Therefore, it is necessary to adopt forward looking view in the construction enterprises to take into account the increasingly dynamic situation of construction industry. Porter (1980) stated that competitive positioning enables a firm to create a defensible position by making offensive or defensive moves based on a firm’s strength and weaknesses. It helps to define a firm’s relative posture in
competitive space. Therefore, with the position at the leading edge by introducing appropriate strategies, it allows flexibility and enables firms to become adaptive to meet the changes of the operating environment which increases the chances of survival.

2.7 Definition of Strategy

There are a number of versions in the literature concerning the definition of strategy, with none that can be recognized universally. In general, strategy is concerned with the means to achieve a given set of ends i.e. the objectives of the company. The term ‘strategy’ interpreted by most definitions, common characteristics are summarized as follows (Male and Stock, 1991):

i) The mobilization of resources to achieve long-term competitive advantage

ii) A master’s plan of how a company will achieve its objectives and missions.

iii) It is top down and challenges the basis of the basis of company in relation to the resources available to the company, in the present and future and the opportunities and threats present in the environment

iv) A set of decision-making to guide organization behaviour.

v) A strategy may be explicit or implicit

vi) A strategy is a stream of significant decisions

vii) It falls within the realm of senior management knowledge only or is diffused throughout the company giving it an unverbalized common purpose.

viii) Strategy evolves out of the minds of and interaction between individuals. Through this process, strategy can be conceptualized and developed either within an individual or group.
The best interpretation of ‘strategy’ which covers all the above aspects interpreted by Male and Stock (1991) is as follows

‘the implied or explicitly stated means that are developed by management through cognitive and behavioural decision-making processes to achieve the company's objectives and guide organizational behaviour.’

In the above context, strategies are concerned with long range plans that a company adopts in order to reach its goals in an environment. It determines the long term relationship of the firm with its environment by guiding organizational behaviour and inducing behavioural changes in people to meet the firm’s objectives.

2.8 Review of the UK Construction Industry Related to Strategies

In this section, strategies adopted in the 1960s, 1970s, 1980s and 1990s are reviewed.

A. Strategies Adopted in the 1960s (Without Recession)

In the 1960s, given a stable economic environment, market specialization prevailed without the fear of the loss of market. Entry to a new market could be carried out without any influence from economic fluctuation.

The result was that contractors enhanced their competitive strength by establishing a niche in a growing market. The core strategy focused on operational level which aimed at improving routine system, procedure and skills. The change of environment could be handled sufficiently without the need of any extensive environmental appraisal. Large contractors with more competitive strength engaged in take over
activities to secure market with good prospect and a stable source of supply (Lansley, 1987).

There were a large number of firms undertaking acquisition in order to sustain the expansion by the end of 1960s (Ball, 1988). At that time, marketing activities were not recognized as the industry did not fall short of work (Hillebrandt and Cannon, 1990). Merger activities were low because the construction sector was booming and it was not necessary to rely on other sectors that were profitable (Ball, 1988).

B. Strategies Adopted in the 1970s

In the early 1970s, the contractor became more adaptive in selecting prospective market due to a transformation in the environment. It was characterized by an expansion of construction firms through acquisition, including both the contracting and the speculative housebuilding firms (Ball, 1988). The move was due to the disadvantages suffered from the contracting firms as they constructed buildings which were investment goods and the demand for their output was subject to wide fluctuation of a cyclical nature. These firms undertook horizontal diversification as well as spreading operations round the world (Hillebrandt and Cannon, 1990). It was important for the speculative housebuilding firms to engage in take over activities in order to acquire land to take advantage of the rising market conditions (Ball, 1988).

Followed by 1973 economic recession, firms without taking advantages of the Middle East boom suffered the most (Hillebrandt and Cannon, 1990). The effects of the decline of the projects were more than offset by the Middle East construction boom (Lansley, 1988). Marketing started to be introduced into the company policy because of the opening up of the Middle East market as well as a fall in demand
brought by the recession (Hillebrandt and Cannon, 1990). Merger and takeover collapsed during the period between 1973 and 1978 irrespective of its being as a predominant strategy in the early 1970s. The sharp drop in merger activity was due to the crisis that caused many housebuilding firms become overgeared by borrowing too much to finance speculation in land and property- assets of which value dropped sharply and could not be sold even at the new depressed prices (Ball, 1988). As the unpredictable environment disfavored the integration of firms, the contractors could mainly rely on joint ventures to secure key resources (Lansley, 1988). In the late 1970s, the downturn in the overseas market discouraged UK firms to undertake mergers as a means of moving out of overseas market (Lansley, 1988).

C. Strategies Adopted in the 1980s

The early 1980s marked the period of recovery and was characterized by a change in the client’s need which raised the attention of contractors to satisfy the clients and meet their requirement of quality improvement. New tactics such as advocation of new technologies were highlighted to satisfy the interests of the client (Lansley, 1987). The function of marketing in the industry was emphasized in the 1980s as the continuous survival of the firms depended on securing workload through appropriate marketing strategies (Fisher, 1989; Morgan and Morgan, 1990). Besides, as the demand in the 1980s was unpredictable, there was an increasing in the use of subcontracting so that a given set of limited skills could be organized across a large number of projects instead of being forced to apply those skills in a more wide-ranging way on individual projects. The environment became more competitive and a greater degree of efficiency through restructuring was required (Lansley, 1987).
D. Strategies Adopted in the 1990s

During the period between the late 1980s and the early 1990s, it marked another recession. Cost cutting strategies were widely adopted by contractors as a means to encounter the recession (Hillebrandt et al., 1995). As far as those firms with over-expansion in 1980s were concerned, financial strategies such as disposal of assets were introduced as they were severely affected by recession (Geroski and Gregg, 1993). To increase competitiveness in the market, contractors desired to concentrate on core business instead of pursuing diversification strategies predominantly (Hillebrandt et al., 1995). Efficiency was emphasized in the highly competitive market (Geroski and Gregg, 1993).

2.9 Lessons Learnt from the Strategies of the UK Construction Industry

In light of changes of economic development from UK, strategies adopted as a means for survival during different recession periods are summarized as follows.

A. Cost cutting strategies

Cost-cutting strategies are considered as the most essential strategies for construction firms. A construction business cannot survive without making a profit or at least breaking even. Cost reduction can help to generate a greater profit in a quicker way instead of increasing turnover in most industry (Schleifer, 1990). The adoption of cost cutting to minimize wastage and unnecessary expenditure constitutes an important survival tactic for a business in a downturn economy (Morine, 1980). The recession results in dramatic changes in the finance of the contractors which affects their capital structure, their profits and cash flow. In order to bid projects with a lower price, it is fundamental for contractors to reduce the cost of production (Hillebrandt et al., 1995).
The UK economy suffered from recession during 1990s. As a consequence, productive structure experienced a major transformation. Measures were implemented to reduce costs such as staff redundancies, reorganization of offices to lower overheads, slimming of head office, control over capital expenditure on plant and machinery, salary freezes, salary cuts, cancellation of bonuses and less training. In the manpower aspect, managers had to be prepared to dismiss people during recession in order to keep the organization lean and fitter at any time during recession. It was also common to cut the training budget due to the shrinkage of training functions of most firms (Hillebrandt et al., 1995).

Geroski and Gregg (1993) found that those who were extremely severely or severely affected by the recession during the early 1990s embarked on short sighted cost cutting in the rate of human and physical capital accumulation such as reducing workforce in term of layoffs and plant closures. It was perceived as a sacrifice of longer run competitive ability for the alleviation of current distress. Hillebrandt et al. (1995) stated that heavy reduction in staff in response to recession during the early 1990s was mainly due to a drastic shrinkage of workloads and urgent needs to cut cost for most of the construction companies for immediate survival.

On the other hand, Geroski and Gregg (1993) found that those less severely affected by recession sought to enhance long term competitiveness and adopted strategies such as reduction in employment and wage growth as their cost cutting strategies. Other measures to save cost included reduction in headquarter costs and inventories as strategies widely adopted by the contractors. From the viewpoint of these firms, human capital was preserved in order to provide a solid foundation for their post recession operations. Therefore, the extent to which cost is cut depends on how
severely a construction company is affected by the recession and the organization’s need for maintaining long term competitiveness.

B. Financial Strategies

Financial strategies deal with the adjustment in the level of fixed asset as well as the funding from equity and debt (Hillebrandt, 1984).

Geroski and Gregg (1993) found that firms which were extremely severely and severely affected by the recession during 1990s were more likely to adopt financial decisions while those firms with minimal effect did not opt for this strategy as important for survival. Hillebrandt et al. (1995) suggested various possible strategies including disposal of assets, reduction in dividend cover and increase in short term borrowing.

Since 1973, the construction industry in UK experienced a decline with minor recovery up to early 1980s. A considerable amount of contractors disposed their plants to get rid of the surplus capacity in order to remain in business (Hillebrandt, 1984). To encounter recession in the early 1990s, disposal of assets was considered as a relatively popular strategy because contractors relied on loan for diversification during the boom in the 1980s. As most of the firms encountered over expansion through merger and acquisition in the 1980s, there was no likelihood of paying off loans and reducing gearing during recession. Therefore, assets were disposed to stand a higher chance of survival for companies that mainly suffered from over-expansion in the 1980s (Hillebrandt et al., 1995).

As far as strategies of reducing dividend cover, rescheduling debt and increasing
short term borrowing were concerned, a small portion of contractors adopted these strategies as means to cope with the early 1990s recession. The reason for a low rating of increase in short term borrowing was due to increases in the gearing ratio of a company which led to problems such as sharp falls in share values arising from a high risk nature of business, high interest costs as well as difficulties to convince potential clients that the company was strong enough to complete a contract. Hillebrandt et al. (1995) stated that the cut of dividend raised the problem of the loss of faith for investors and eventually difficulties in raising funds. Therefore, these survival strategies did not benefit the contractors in terms of survival during recession.

C. Investment in Marketing

Marketing had not been well developed in the UK construction industry until the fall in the domestic demand in the 1970s with a move away from traditional methods of contractor selection and contractual arrangements which required the contractors to actively seek work from prospective clients and with the need for sophisticated marketing in the expanding markets of the Middle East (Male and Stock, 1991). Also, the recession in 1973 resulted in a fall in demand from both private and public sector which demanded contractors to strengthen their marketing efforts (Hillebrandt and Cannon, 1990). In general there were three aspects of marketing policies in the construction industry as follows (Male and Stock, 1991)

i) Marketing strategy, which deals with the process of selection of which markets the company wishes to operate in

ii) Marketing research, which deals with the process of determining what market to be in, gathering of information required for that decision and aid entry into selected market
iii) Selling, which involves a proactive approach of finding potential clients before
they have formulated their ideas and a reactive one which responds to a
definite client requirement

The function of marketing became more increasingly important in the 1980s due to
the economic downturn environment and a change in client attitude to exercise a
greater control over construction process (Yisa et al., 1996). All firms were aware of
the importance of marketing which had been forced upon them by the retrenchment
of the clients. It was witnessed by a drastic change in the procurement system from
traditional to other forms like design and build, management contract which
encouraged more participation of client in the construction process. Attention was
focused on the importance of marketing functions in terms of building relationship
with clients, penetration into new markets, client’s research and attainment of
competitiveness. In view of a long term strategy, relationship marketing should be
implemented in order to develop strategic alliance such as package deals, partnering
arrangement and offer additional services to client in addition of construction
services which necessitates an increase in expenditure on manpower, technology,
Research and Development (R& D), management support and commitment to
marketing objectives.

There are a number of general studies showing that fulfillment of these requirements
allows a contractor to build up the relationship with clients and secure adequate
workload to ensure survival during recession. Koksal and Ozgul (2007) established a
positive relationship between marketing efforts and company performance in terms
of sales, marketing shares and profitability during recession.
Specific to the performance of marketing functions in the construction industry, positive aspects of marketing are highlighted. Davis and Walker (2003) pointed out that contractors could be benefited by establishing relationship marketing in the medium and long term with an increase in transaction, creation of a long span of life for relationships and enhanced organizational achievement. Bennet (2005) stated that a contractor that adopts a long term marketing policies across business cycles can improve the company performance significantly. It follows that marketing staff should not be laid off during recession and marketing should be allocated to ongoing programmes. Wong and Logcher (1986) found out that more marketing efforts can improve a small firm’s performance during bad time. Contractors should not commit mistakes by reducing expenditure on marketing and advertising during economic downturn environment (Stutz, 2002). Instead, companies hoping to remain survival in a downturn environment should avoid cutting activities in marketing and product development. Therefore, budget for marketing activities should be increased (Palmer, 1991).

As far as civil engineering contractor sector was concerned, Yisa et al. (1995) discovered that these sectors tend to devote more resources at making contracts with new clients and existing client for new jobs. Such a distinction can be explained by the normal practice that most of the civil engineering contracts are undertaken under design and build procurement method. It highlights the importance for civil engineering contractors to devote resources in marketing strategies in order to improve the market performance during recession.

**D. Investment in Research and Development**

Innovation is one of the key issues in sustained competitive advantage in
construction which can be enhanced by investment in research and development (R& D) (Clark, 1989). Innovation can be broadly classified into process innovation or product innovation.

Product innovation refers to the advancement in technology which results in superior product while process innovation refers to the substantial increases in efficiency, but without a significant advance in technology (Lansley, 1981). R& D aims at improving the products through the use of advanced technology which is considered as product innovation (Clark, 1989).

Under the economic recession in the late 1980s, investment in R& D was considered as an essential ingredient for survival of the construction companies as there was a shift in the client’s interests focusing on the quality and efficiency in the production during the 1980s (Lansley, 1987). Geroski and Gregg (1993) investigated the responses of UK contractors towards the early 1990s recession and discovered that those who were less severely affected by the recession invested in R& D and new product or process innovation. These responses suggested that these companies aimed at developing competitive strengths which would provide a solid foundation for their post- recession operation. Those firms that were hard hit by the recession forced to cut from their operations which eroded the technological causes.

There are a number of general studies related to the advantages of adopting R& D strategy. A positive relationship is established between sales and profit and increase in R& D budget because an increase in R& D budget can capture niche market, technology and production method that saves costs (Koksal and Ozugal, 2007).
However, specific to the construction industry, construction firms focus more on process innovation during recession and pursue activities which concentrate on cost saving and productivity enhancement during recession (Van Duijn, 1984). The reason is that it is costly to adopt product innovation as it is more dependent on plant and equipment. However, process innovation such as efficiency improvement is found to be more organizational and easier to be adopted (Hillebrandt et al., 1995).

It is contended that unlike manufacturing, R&D in construction provides no significant advantage to the contractors (Seymour, 1987).

With respect to the types of the construction companies that are likely to implement this strategy, R&D is often undertaken by the building materials industry in UK (Hillebrandt, 1984).

As far as its impact on international contractor sector was concerned, Nam and Tatum (1992) stated that their success has been attributed to the important role of technology in creating and sustaining the competitive advantages. Rafetery et al. (1998) stated that Japan devoted huge efforts in R&D to emerge as a world leader in the construction industry. Between 2.5%- 3% of the Japanese contractor’s workforce is involved in R&D for the company and budgets of US 40 million per annum per company are usual (Male and Stocks, 1991). Therefore, in order to secure workload in overseas market during recession, international contractors can enhance their competitiveness by investing in R&D expenditure.

E. Diversification in Construction Related Businesses

Hillebrandt and Cannon (1990) identified three approaches used by the contractors, namely backward vertical integration, forward vertical integration and horizontal
diversification. It may take place either by internal development or by merger and takeover but obstacles exist such as unwillingness to take the risk involved in a new market, the need for a different know-how and financial barriers. Taking these considerations into account, Langford and Male (1991) suggested that UK construction industries sought to grow by means of backward integration into the production of construction materials and forward integration into property development.

Diversification is important to the contractors under a poor economic environment. It is suggested that the company can find more clients if more products or services can be provided (Stutz, 2002). It is important for contractors to adopt the strategy of diversification as the construction markets are becoming more intensive during recession and of its highly volatile nature (Teo and Runeson, 2001). The reason for diversification is to spread risk by being in more than one business, preferably those which are counter-cyclical in nature (Junnonen, 1998).

Several advantages can be acquired through the use of backward and forward vertical integration as follows (Hillebrandt et al., 1995)

i) To reduce the uncertainty of business i.e. a more secured source of material supply

ii) To reduce the transaction cost provided that transactions recur frequently

iii) To take advantage of technological interdependence

iv) To increase the market power by imposing barrier to entry

During the 1970s, there were two major periods of diversification undertaken by the contractors in UK construction industry that were intense. The first was in the boom
period of the 1970-1973 upswing in order to complement their activities or to strengthen the financial base of corporations that were cash-hungry. Another period took place in 1977-79 after the 1973 economic recession which was propelled by the housebuilding sector in order to take advantages of low acquisition cost for creation of a diversified portfolio and a good land bank (Ball, 1988).

Hillebrandt (1995) noted that UK firms had changed from growth and diversification to focusing on core business and restoring profitability by 1993 following a recession. The reason is that they incurred a shortage of capital due to a reduction in turnover during recession as well as facing a more stable supply of materials without the need to own the supplying organization for input of materials by means of backward diversification. Therefore, the availability of capital is one of the factors to be concerned with regard to the implementation of the strategy. Hillebrandt and Cannon (1990) stated that diversification may be more easily accomplished by larger firms with huge positive cash flows as a strategy for profitability enhancement. Barrie (1999) found that UK contractors broke up the conglomerates formed in the 1980s in order to focus on core business during recession. This can be explained by Dioguardi (1983) that owing to their operations and their turbulent environment, contractors could not operate as integrated self-contained units undertaking all of their operations. Moreover, economies of scale could not be considered as their major priority goal. Instead, the organization must be flexible and capable of adapting to changeable conditions.

Wong and Logcher (1986) advised that in good time contractors should prepare for bad times by moving into new market areas, trying new methods and technologies to improve productivity and improve safety records which could be achieved by
building a cushion against exposure to risk by increasing their working capital and by seeking flexibility in resources, cost structure and diversification in line of business. In bad time, firms can improve their performance through effective project planning and control to reduce risk and increase productivity and more marketing.

There are a number of studies concerning the relationship between the effectiveness of diversification in other construction related businesses and the improvement in company performance in which all are negative. Ibrahim and Kaka (2007) viewed diversification as a long term strategy and found out that diversification did not help the performance of the UK construction firms. Hillebrandt (1996) used time series data and examined the market strategies adopted by large UK contractors in the boom of the second half of the 1980s and in the recession of the first half of the 1990s and found that diversification by contractors into other business had not been successful. The explanation behind is that contractors are simply not good at other businesses.

F. Developing Overseas Market

Overseas work has been considered as an important source of new markets for UK contractors, especially after the collapse of domestic market in 1973. Its importance could be justified by the almost six folded increase in value of overseas work between 1970 and 1978. Middle East such as Saudi Arabia was the targeted market during the 1970s. There were a number of the largest contractors taking advantages of the mid- 1970s overseas boom to offset the declining UK market successfully (Ball, 1988).

During the period between 1982 and 1983, the Middle East market shrank due to the
depression caused by falling oil revenues and debt rescheduling crisis. Sharply growing involvement in the U.S. construction market partially offset the decline but the workloads in real terms still did not match those of the 1970s. The fall in the total value of overseas work implied that overseas market kept declining and contractors in UK became more difficult to acquire work in overseas (Ball, 1988).

In the early 1990s, a portion of the contractors in UK still insisted on growth despite the recession as they aimed to be large international contractors (Hillebrandt et al., 1995). Some of these large contractors in UK adopted development in overseas market to counteract the problems within domestic construction market. The major reasons for moving into international platform were to increase long term profitability as well as to maintain shareholder’s return. Participation in overseas work was subject to the availability of capital, level of return, risk of operation as well as perception of shareholders (Crosthwaite, 1998).

Raftery, et al (1998) listed out the prerequisites for operating in international level. It is stated that in order to compete in overseas market, firms need to upgrade capabilities and resources, improve efficiency, raise the quality of work, and improve ability to secure low cost capital resources. In reality, only large technologically qualified contractors are allowed to enter into overseas contracts. For example, Japanese are among the leader in construction technology and the most dominant exporter of construction services in the Asian Region as they constantly pay efforts in technological innovation through R& D and are supported by a large domestic market and internationalization of demand from Japanese investors in foreign countries. To guarantee the success of this strategy, it is essential that contractors possess technological superiority, financial capacity and the skills of
Forming joint ventures involves pooling resources from the enterprises and sharing risk for the objective activities. Contractors in the UK actively pursued very large projects through joint ventures during recession during the early 1990s (Hillebrandt et al., 1995). Seeking the workload was their major concern for contractors during recession and forming joint ventures became a means to achieve the ends. UK contractors were positive towards collaboration in terms of joint ventures and the motive for the collaborative relationship was mainly in response to clients’ needs, followed by the reasons of...
sharing and spreading the risk associated with large, complex or long term contracts (Akintoye, 2007).

Many Hong Kong contractors including large sized contractors like Gammon Construction Ltd. have established themselves as a fitting local partner for major foreign contractors (Walker, 1995). Besides technological transfer, a higher likelihood of satisfying the clients’ requirements can be guaranteed.

As far as the rationale for forming joint venture is concerned, Hillebrandt and Cannon (1990) stated that considering a large scale of project, there is a limit to the size of project which could be affordable on their own and the complexity of project imposes higher risk to the contractors. Joint venture is the answer to this problem. Therefore, this strategy is only suitable for large sized contractors due to its ability to afford the complexity and the large size of the contract. Small contractors do not have enough resources to enter into these types of procurement arrangement. Furthermore, coincidence between the joint venture partners is fundamental. Hillebrandt (1990) stated that compatibility of objectives between the joint venture partners was important for its formation. For examples, Japanese contractors are often willing to accept very low margins because they see low prices as the means of penetrating the market. Therefore, inconsistency in the objectives between partners and these contractors imposes barrier to the formation of joint venture.

**H. Developing Merger and Acquisition**

The implementation of merger and acquisition can be divided into both domestic and international level.
As far as merger and acquisition in the domestic level is concerned, based on the experience of the UK industry to deal with the recession during the early 1990s, the contractors resorted to focusing on core business instead of diversification due to insufficient capital as well as lack of experience in managing other businesses (Hillebrandt, 1996). For those acquisitions and mergers firms in UK during recession, it was conducted mainly in the material sector. Langford and Male (2001) indicated that capture of cash-hungry business and secure of supply sources were the major reasons for take-over activity in UK contracting.

As far as merger and acquisition in the international level is concerned, Crosthwaite (1998) stated that the increase in overseas workload arose largely as a result of joint venture rather than foreign company acquisition. Carrillo and Heavey (2000) stated that UK contractors preferred a non-acquisition manner such as the use of joint venture to expand into the Central and Western European markets than acquisition as the risk of acquisition was too high during early 1990s. The above statement suggests that merger and acquisition is not preferable as a means for overseas expansion.

Fellow et al. (2002) highlighted the implication of merger and acquisition on the company’s resources. Merging and acquisition are considered as methods of achieving rapid expansion or diversification. Since merger and acquisition is concerned with growth of a company by means of increasing a company’s market share from expanding markets, it necessitates a great pool of internal resources. Therefore, only contractors with sufficient resources are qualified to opt for this strategy during recession.
The merits of the merger and acquisition strategy are listed on the following grounds. Fellow et al. (2002) stated that taking over a firm with a fund of expertise in a particular area avoids the problem of starting from scratch and danger of costly mistakes. Haspeslagh and Jemison (1991) stated that related acquisitions involve the consolidation of both human and physical assets and creation of economies of scale through resources sharing and transfer and reduce the overall operating cost for the sake of superior performance. It can be seen that cost minimization through synergy is the major benefit for adopting this strategy.

However, a high level of risk is involved in the adoption of this strategy for the construction industry. Bleeke and Ernst (1991) regarded it as a high risk option as about 50% of acquisitions are considered failures by some measures. Thomas (1978) mentioned that in professional service businesses, the acquisition of another firm is risky because people and their skills are the major purchase items which might choose to leave and take the skill as well as their some of their clients.

I. Increasing in the Use of Subcontracting

Abdel and McCaffer (1987) stated that there was an increase in the use of subcontractors by the main contractor in UK during the late 1980s due to the effect of recession that increased the competition and forced the larger companies to bid for tighter tenders in order to ensure the continuity of works. Tighter tender from contractors was met by obtaining tighter quotation from the subcontractors. Besides, estimation with a high level of difficulties such as attendances and material wastage can be subcontracted to subcontractors so that lowest tender can be obtained as well as shifting the risk of inaccuracies to the subcontractors. Therefore, intense price competition via increasing in the use of subcontracting under competitive tendering
was undertaken as a means to secure workload during recession through bidding lower price in the tender.

A number of advantages can be acquired through an increase in the use of subcontracting work. Flexibility is the outcome of using extensive subcontracting. Hillebrandt (1984) summarized the major advantages as follows:

i) Specialist trade inputs can be chosen whenever they are needed

ii) Advantages of low prices by competitive tenders can be obtained

iii) Workforce can be kept small and the costs of having underemployed operatives on his payroll can be minimized

iv) Working capital requirement can be kept down

v) Greater freedom in choosing what contracts to be bid for can be enjoyed

According to Pheng and Hua (2000), competitive bidding for subcontracting work was the normal practice of contractor to reduce cost in response to recession. Its popularity suggested that construction firms seized opportunities to obtain lower bid prices through competitive tendering rather than to seek the services of familiar subcontractors through negotiation.

However, Chiang et al. (2001) commented that the profit margins are razor thin and are only squeezed through the exploitation of lower layer subcontractors. Competitiveness based on cost reduction is not sustainable as it creates no enduring competitive edge to cope with recession. Therefore, price competition does not necessarily ensure survival during recession.
J. Undertaking Smaller Projects

Hillebrandt et al. (1995) stated that large contractors in the UK participated in many smaller projects and competed with medium sized contractors during recession in the early 1990s. It is discovered that larger companies competed on contracts of lower than 250,000 pounds in their portfolio which were considered as smaller projects with low value. The reason is that the number of large projects in the UK had dwindled and the total work available had fallen during that period. Undertaking smaller projects enabled the contractors to enjoy stability and led to a hand to mouth existence provided that there was no certainty about workload during the recession period.

However, it is stated that no contractor undertakes smaller contracts unless he is obliging an existing client. The reason is that the overhead costs of managing small contracts are disproportionate to their total value (Hillebrandt and Cannon, 1990). Considering the recession environment, the scenario of undertaking smaller projects by large firms reveals that the supply of construction work is so low that larger contractors have to capture the market share of smaller one under an uncertain business environment (Hillebrandt et al., 1995).

K. Improving Relationship with Subcontractors

In theory, from the perspective of main contractors, improving relationship with subcontractors can increase the strengths of main contractors which create competitive edges to cope with the recession. This is termed as ‘relational contracting’ which is defined as recognition of mutual benefits and ‘win- win’ scenarios through more cooperative relationships among the contracting parties (Williamson, 1985).
In contrast to arm’s length relationship governed by the contract terms, a firm may build a long term, cooperative relationship with contractors which extends beyond a simple market mechanism (Dyer, 2000). In relational contracting, there is a long term relationship between the parties of the contract based on a series of short term transaction. Further relationship can be established at the outset or borne out of the interaction between the parties over time. Therefore, contract is not viewed as a discrete single transaction but the opportunities for more of a continuation of previous and future transactions (Lau, 2005)

Establishment of relationship can be classified into both long- term and short term scope. Gray and Flanagan (1989) stated that building a long term relationship with subcontractor can help to maintain a high level of efficiency as well as a high level of ability to complete the work. This is especially highlighted in the success of Japanese building industry based on long term relationship with subcontractors. Bennett et al. (1987) illustrated that the practice of that Japanese contractors who pay a fair price of the work to subcontractor to ensure a certain level of profit making while subcontractors agree to deliver the agreed work to prescribed standard. The outcome is the improvement in quality and productivity which can enhance competitiveness of contractors to cope with recession. Chiang et al. (2001) stated that maintaining long term relationship with the subcontractors can secure exclusive services from them. Dyer (2000) investigated into the collaborative advantages and found that extended enterprise is an important new unit of competition and therefore firms must be able to create partnership with other firms to form a network.

In the Hong Kong construction industry, it is found that main contractors hire several particular subcontractors whom they cooperate continuously. In practice,
main contractors make use of their own subcontracts to protect their own rights. The relationship is adversarial to a certain extent. However, verbal agreement or simple worded contract exists for some small valued project. There are even cases in which subcontractors commence their job based on verbal agreement before formal documentation is signed. Therefore, provided that the relationship between the contractors is good, relational contracting exists without strictly adherence to the contract in Hong Kong (Lau, 2005).

Haksever et al. (1996) stated that UK contractors did not exercise long term relationship with subcontractors in the mid-1990. At that time, construction activities were characterized by an extensive use of subcontracting due to economical pressures. Over 90% of construction work was subcontracted on the majority of contracts. Subcontracting created the problem of high level of disputes, claims and poor performance, leading to a great amount of friction, dissatisfaction, and mismatch of goals. The reason for short lived relationship between contractors and subcontractors in UK was that contractors perceived most of the benefits falling on lesser risk, conflict and better communication instead of improvement in time, cost/ price and quality issues. The main contractors were only interested in commercial factors at the point of subcontracting such as lowest bid, project performance and current workload, without paying attention on the need to build a long term relationship with the subcontractors. Therefore, due to the above reasons, long term relationship has not been upheld between contractors and subcontractors during the 1990s.

However, Jaafar et al. (2006) found that most of the small contractors firms in the UK gave priorities on maintaining a good relationship with subcontractors in order
to secure limited resources and credit from subcontractors to support their operation. Therefore, short term relationship do exists between the contractors as a means of improving their competitive edges.

L. Improving Relationship with Suppliers

Similar principle mentioned in ‘Improving relationship with contractors’ also applies in the same way as ‘Improving relationship with supplier’. Improving relationship with suppliers can also increase the strengths of contractors and subcontractors which creates competitive edges to cope with the recession.

The benefits of building up relationship with suppliers enables contractors to take advantages of improving efficiency and cost effectiveness, increased opportunity for innovation, and continuous improvement of quality products and services (Hancher, 1991). Cost effectiveness refers to a more favorable discount enjoyed by the contractors over large quantities of goods that are ordered (Hillebrandt, 1984). Other advantages of improvement in the relationship with supplies can be found in the reliance of contractors on the credit of suppliers to support their operation (Jaafar et al., 2006) as well as a cooperation in quality management and development of communication, logistics and products (Sarkilahti, 1996). Instead of obtaining the best possible deal at the cost of its counterpart, the attention is focused on minimizing the costs of production chain as a whole. Eventually, the main contractor can be benefited from lower cost and increase in the competitiveness of end products in the marketplace (Sarkilahti, 1996).

M. Improving Relationship with Clients

In theory, improving relationship with clients can be achieved by means of
relationship marketing. It aims at developing long term and sustained contract with clients or customers so that their needs can be targeted and satisfied in return for client loyalty. Partnering is one means of building relationship and it is considered as an important one in construction because of lumpy workload and extremes in the construction industry (Smyth, 1999).

There are a number of studies illustrating the advantages of improving relationship with clients. The benefit of the contractor with an improved relationship with client is repeated business or higher levels of orders in referral market. Therefore, the return for investment in partnering for the contractor embraces greater work continuity, increased market share and improved profitability (Smyth, 1999). Increased prospect of a steady flow of work can be guaranteed and it is considered as desirable at all times but fundamental in a depressed market (Critchlow, 1998). A good relationship between a contractor and a developer can facilitate the contractors’ forward planning with some guarantee of workload. Developers can also be benefited from the saving of time and cost to search for reliable contractors (Chiang et al., 2001). Apart from securing workload, other potential benefits of maintaining a good relationship with clients allow the contractors to depend on advanced payment from the clients to support the operation which can improve the cash flow of the operation as that they usually have limited resources (Jaafar et al., 2006)

In the Hong Kong construction industry, it is found that main contractors are seeking close working relationships with clients. It is common for clients to work with the same contractors over projects. Clients tend to favour contractors that have previous working experience with them. In choosing the contractor, clients do have preferred list and the use of selective tendering is often adopted. This indicates that
maintaining a long term relationship with clients can help to develop long term and sustained contract with the clients (Lau, 2005).

In the UK construction industry, since many projects were handled on an individual basis with the use of traditional procurement during the period between the 1970s and the 1990s and thereby did not involve long term relationship with the client. However, it is gaining acceptance in a cross section of industries such as housing sector etc. in the 2000s (Smyth, 1999).

**N. Concentrating on Core Business**

To encounter the early 1990s recession, UK contractors abandoned the long term diversification strategies for the sake of immediate survival, followed by the growth in the turnover of construction firms and diversification into construction related businesses in the 1980s. Many of these expanded businesses were disposed of during the recession. The reason was that there was a reduction in the profit of diversified businesses. These non core business included mechanical and electrical engineering, builders’ merchants, time- share accommodation, health care and waste disposal. Instead, concentrating on core business was widely adopted by UK contractors to encounter the recession (Hillebrandt *et al.*, 1995). A greater concentration of specialized activities was allowed. Solid profits from the company’s core business areas could guarantee the medium and long term survival of the troubled company which stood a higher chance for survival (Arpi and Wejke, 1999).
CHAPTER THREE
CHAPTER THREE
QUESTIONNAIRE SURVEY

3.1 Introduction
In the above section, the literature, on the subject of the causes of failure and common practice of survival strategies adopted by UK construction firms, is reviewed. After reviewing this literature, basic knowledge of causes of failure and survival strategies is acquired. The practices of UK construction firms form the basis for setting up the questions in the questionnaire so that it allows the UK practice to be applied to the construction industry of Hong Kong. With this fundamental knowledge, an investigation about the causes of failure and survival strategies in the construction industry of Hong Kong is then conducted. The investigation consists of a questionnaire survey and follow-up interviews. The questionnaire survey focuses on the perception of contractors over causes of failure in Hong Kong and the effectiveness of strategies that had been adopted in response to the recession. Findings from the returned questionnaire provide a basis for conducting the follow-up interview.

3.2 Target Group
In order to obtain high quality data, the target group of the questionnaire focuses on directors of the contractor firms. They are the group of participants which deal with long term planning and formulation of strategies for their firms. As the policy making of the directors involves issues related to the causes of failure and formulation of strategies, they should be the best target group to participate in the questionnaires. To acquire a higher response rate, the request for completion of questionnaires was personalized.
3.3 Classification of the Size of Contractors

Shash and Abdul- Hadi (1993) set up the criteria for classifying different types of contractors according to the number of permanent employees, the value of equipment owned and the business volume. However, there is no best measurement on the size of contractors as changes in different measures will lead to different classification of a contractor. The Hong Kong Government Works Bureau Technical Circular lays down the rules for the administration of the list of approved contractors for public works and the criteria for assessing the financial, technical and management capability of contractors. The approved contractors are further divided into Groups A, B or C according to the value of contracts for which they are normally eligible to tender as follows:

<table>
<thead>
<tr>
<th>Classification of contractor</th>
<th>Tender limit (contract value) ($ million)</th>
<th>Minimum employed capital (Note 1) ($ million)</th>
<th>Minimum working capital (Note 2) ($ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>Up to 20</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Group B</td>
<td>Up to 50</td>
<td>5.3</td>
<td>5.3</td>
</tr>
<tr>
<td>Group C</td>
<td>Exceeding 50</td>
<td>9.0</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Source: WBTC No. 9/97

Note 1: Employed capital refers to the shareholders’ funds. It basically comprises capital reserves and retained profits of a company.

Note 2: Working capital refers to the net current asset position (current assets minus current liabilities) of a contractor. It serves as an indicator of the contractor's liquidity position.
In this dissertation, the categorization of different sizes of contractors is based on the above list in terms of the three different groups. Such a classification is a reliable method as it has been accepted by the Hong Kong Government and monetary value has an impact on the size of the companies in terms of availability of resources. Contractors in Group C are regarded as the large one while contractors in both Group B and A are regarded as small.

3.4 Objectives of the Questionnaire

Questionnaires were sent to different practitioners in the construction industry of Hong Kong. The questionnaire survey has the following objectives:

1. To investigate the impact of recession on the performance of contractors.
2. To identify the causes of failure
3. To identify the strategies of the contractors in response to the recession
4. To identify the extent to which the strategies undertaken by contractors are successful in overcoming the problems of recession.
5. To identify the changes in the investment of the contractors in response to recession.
6. To identify the extent to which the strategies of the contractors that brings forward in the investment plan is successful in overcoming the problems of recession.
7. To have a basis for follow-up interview

3.5 Structure of the Questionnaire

The questionnaire consists of mainly close ended questions. They are mainly aimed at obtaining rating for different items such as causes of failure and the extent to
which strategies adopted in response to recession had been successful. In the questionnaire, most of the questions are ticking type so that it is convenient for the respondent to finish the questionnaire within a short period of time. A total number of 125 questionnaires were sent by post to the contractors in February 2009. The sample was randomly selected from the Registered General Building Contractor list from the website of Buildings Department.

A cover letter was sent together with the questionnaire. The cover letter states the objectives of the research, which is to investigate the survival strategies that had been adopted by contractors in response to recession and make recommendations for successful strategies that can be introduced to contractors to ensure the survival of firms. Prepaid envelops were also included so as to collect the finished questionnaires. Samples of covering letter and questionnaires are attached in Appendix 1 and 2 respectively.

The questionnaire consists of four sections:

Section One: Basic Information
Section Two: Causes of Failure
Section Three: Strategies
Section Four: Follow- up Interview

A. Section One: Basic Information

The first section is the basic information. It requires the respondents to give the general information about their companies i.e. group of contractor under the list of approved contractors for public works, business nature of the company, years of
experience and market share. The data collected is useful in dividing respondents into different groups and investigating the background information of the respondents. Questions related to the market share of the respondent are also addressed in this section including Macau and overseas market so that the analysis related to the impact of recession as well as the survival strategies can be conducted comprehensively.

**B. Section Two: Causes of Failure**

The second section aims at identifying the effects of recession on contractor firms and the causes of failure. They were asked to give ratings for both parts. For the first part related to the effects of recession on contractor firms, it helps to understand the aspects of activities which are ‘seriously affected’, ‘mild affected’ and ‘not at all affected’. Another implication is to illustrate whether the problems resulted from the recession are caused by the economic factor or not. For the second part related to the causes of failure, the respondents are required to choose one out of the five options i.e. from 1 to 5, respectively ‘Extremely important’, ‘Very important’, ‘Fairly important’, ‘Slightly important’ and ‘Not important’. If the respondent does not experience one of the causes, he is not required to respond for that column. This part gives an overall picture of the major sources of problems constituting failure for the contractor firms.

**C. Section Three: Strategies**

In this section, it consists of two parts. For the first part related to the survival strategies adopted, it requires the respondents to select the strategies for survival as well as the extent to which these survival strategies adopted had been successful in overcoming the problem of recession. If the respondent does not implement any one
of the survival strategies, he is not required to respond for that column. In addition to the survival strategies that were chosen, the respondents are required to choose one out of the five options, respectively ‘Very successful’, ‘Moderate success’, ‘Minimum success’ and ‘Not successful’. This part gives an overall picture of the common successful strategies adopted by the contractors. For the second part related to the changes in the investment decision of the firms, it requires the respondents to select the investment policies that had been introduced, namely ‘Abandoned’, ‘Postponed’ and ‘Brought forward’. If the respondent does not introduce any of the investment policies, he is not required to respond for that column. The data collected is useful in providing insights on the effects of recession over the investment decisions among the contractors. It follows that if any of the investment decision undertaken, further insights would be gained upon successful investment strategies by requiring the participants to choose one of the 4 options, namely ‘Very successful’, ‘Moderate success’, ‘Minimum success’ and ‘Not successful’. It is useful in identifying the successful strategies over the investment decisions adopted by the contractors in response to recession.

D. Section Four: Follow-up Interview

The aim of this section is to see whether the respondents are willing to be interviewed. They are asked to give their personal contact if they are willing to attend follow-up interview. This section helps the researcher to locate any potential interviewee for follow-up interview so that a deeper understanding on the topic of successful strategies can be acquired.

3.6 Responses from the Questionnaire Survey

A total of 125 questionnaires were sent and 23 completed questionnaires were
returned. The response rate is 18.4%. Among the questionnaires, 58 questionnaires were distributed to Group C contractors and 67 were distributed to Group A and B contractors. For Group C contractors, 8 of them are international contractors. Among the 23 respondents, there are 7 contractors from Group A and B types and 16 contractors from Group C type. Under Group C type, there are 5 contractors from international level and 11 contractors from local level. The following table (Refer to Table 3.1) shows the details of the response rate.

<table>
<thead>
<tr>
<th>Category</th>
<th>Total sent</th>
<th>No. of respondent</th>
<th>% out of total sent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group C</td>
<td>58</td>
<td>16</td>
<td>27.5%</td>
</tr>
<tr>
<td>(Local- 50; International- 8)</td>
<td></td>
<td>(Local- 11; International- 5)</td>
<td></td>
</tr>
<tr>
<td>Group A &amp; Group B</td>
<td>67</td>
<td>7</td>
<td>10.4%</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
<td>23</td>
<td>18.4%</td>
</tr>
</tbody>
</table>

Table 3.1: Details of Respondent Rate

It can be seen that the Group C contractors have the highest response rate which is 27.5%. On the other hand, the Group A and B contractors has the lowest respondent rate which is only 10.4%.

3.7 Results and Discussion of the Questionnaire Survey

A. Section One: Basic Information

I) Question 1

The group that the company belongs to under the government registered contractor list is asked in the first question. There are total 16 contractors from Group C type, 6
contractors from Group B and 1 contractor from Group A. Among the 16 contractors from Group C type, there are 5 from international level and 11 from local level.

A majority of respondents come from Group C type but few of them come from Group A and B type. The responses from large sized contractors (Group C) are satisfactory. It would be better if more questionnaires could be collected from small sized contractors (Group A and B) contractors so that sample size is large enough to yield a more accurate result.

II) Question 2

The building sector that the company specializes in is asked in the second question. For Group A and B type, there are total 7 respondents with 6 respondents focusing on building sector and 1 respondent being as a specialist contractor focusing on civil engineering sector. For Group C type, there are total 16 respondents, with 7 respondents focusing on building sector, 1 respondent focusing on civil engineering sector and 8 respondents focusing on both sectors.
A majority of both large and small sized contractors specialize in the building sector and some large sized contractors even perform in these two fields. Different fields they specialize in may have different strategies adopted to cope with the recession. As mentioned in the previous chapter, civil engineering sector tends to introduce innovations and invest in R&D to build up competitiveness in order to survive during the recession. Besides building and civil engineering sectors, there are some large sized contractors responding their specialization in maintenance work and project management which gives some ideas over strategies such as undertaking
smaller projects and diversification into construction-related businesses.

III) Question 3

Experience in the construction industry is asked. For Group A and B type, there are 5 contractors with years of experience between 10 and 20 and 2 contractors with years of experience between 21 and 30. For Group C type, there are 1 contractor with years of experience between 10 and 20, 9 contractors with years of experience between 21 and 30 and 6 contractors with years of experience over 30.

![Figure 3.4: Years of Experience for Group A and B Contractors](image)

![Figure 3.5: Years of Experience for Group C Contractors](image)
Nearly all large sized contractors build up experience over 20 years and a majority of small sized contractors possess only between 10 and 20 years of experience. None of the small sized contractor possesses working experience less than 10 years. They are all well-established and experienced in coping with previous recession. There is a higher likelihood that the failure of business is not correlated with the lack of experience performing in the construction industry. It also indicates that they had survived through the recession between 1998 and 2003 and all of them are qualified to perform in this research.

IV) Question 4
Perception of contractors towards the impact of recession on the company performance is asked. For Group A and B type, there are 1 contractor who had been severely affected by recession and 6 contractors who had been moderately affected by recession. For Group C type, there are 2 contractors who had been extremely severely affected by recession, 5 contractors who had been severely affected by recession, 8 contractors who had been moderately affected by recession and 1 contractor who felt that there was no impact at all.

![Figure 3.6: Perception of Group A and B Contractors towards the Impact of Recession](image-url)
Figure 3.7: Perception of Group C Contractors towards the Impact of Recession

Surprisingly, the percentage of large sized contractors being severely affected by the recession is higher than that of small sized contractors. All of them are local contractors without overseas market share and are entirely suffered from the decline in the total amount of building and civil engineering work. As for other large sized contractors who had been moderately affected, they are characterized by both diversification in both sectors of building and civil engineering sector and possession of overseas market share that helps to counteract the local recession. For small sized contractors, there is one contractor that had been severely affected by recession who is a local contractor specializing in building sector. Again the above same principle can be used to explain its perception. The rest of the contractors perceive the impact of previous recession as moderate because they conduct works at a subcontracting level. Being as specialists, the competition is not as intense as that of main contractors.

V) Question 5

Question 5 is to find out whether there was any decline in the total value of construction works in Hong Kong undertaken by contractors between 1998 and
2003 when compared to economic boom preceding 1997. For Group A and B type, only 1 contractor perceives a significantly decline in the total value of works and 6 contractors perceive a moderate decline in the total value of works. For Group C type, 4 contractors perceive a significantly decline in the total value of works and 11 contractors perceive a moderate decline in the total value of works and 1 contractor perceives no change in the total value of works.

Figure 3.8: Perception of Group A and B Contractors towards Decline in the Total Value of Construction Work

Figure 3.9: Perception of Group C Contractors towards Decline in the Total Value of Construction Work
A majority of the small sized contractors and large sized contractors perceive the extent of decline as moderate. It justifies that the economic environment has a certain impact on the performance of contractors.

VI) Question 6

Question 6 is concerned with whether companies had introduced more debt financing to combat the recession between 1998 and 2003. For Group A and B type, there are 3 contractors introducing debt financing with moderate level, 2 contractors introducing debt financing with minimum level and 2 contractors without introducing more debt financing. For Group C type, there are 6 contractors introducing debt financing with moderate level, 3 contractors introducing debt financing with minimum level and 7 contractors without introducing more debt financing.

Figure 3.10: Level of Debt Financing Introduced by Group A and B Contractors to Combat Recession
A majority of small sized contractors and large sized contractors did not employ more debt which reveals that it is not an essential strategy to ensure survival. It is because employing more debt financing implies the need for a greater ability to meet the principle and interest payment. It is consistent with the statement in the previous chapter that the debt level of contractors is usually kept at reasonably low levels.

VII) Question 7 to 10

Question 7 and 8 are related to market share of the companies and question (Question 7) is asked if companies perform their activities in Macau market. If so, further question (Question 8) is asked with regards to the turnover of Macau market share. For Group A and B type, none of the contractors perform in the Macau market. For Group C type, there are 2 contractors performing activities in the Macau market, with one of them around 10% and another between 20% and 30%. The remaining 14 contractors did not perform activities in the Macau market.
Question 9 and 10 are related to market share of the companies and question (Question 9) is asked if companies perform their activities in overseas market (except Macau). If so further question (Question 10) is asked with regards to the turnover of overseas market share. None of the Group A and B contractors performed in overseas market. There are 6 Group C contractors performing activities in overseas market, with four around 10%, one between 10% and 20% and another one between 20% and 30% while the remaining 10 contractors did not perform.
All small sized contractors did not perform in Macau and overseas market during the recession between 1998 and 2003. The reason is that they are not affordable to move into the foreign market due to small in size and lack of capital. There are only 2 large sized contractors who performed activities in Macau and further six contractors who performed activities in overseas market and the remaining focused on the local market. Both turnovers of the markets were at low level. Therefore, the analysis for large sized contractors provides a well-rounded result as all the types of the contractors are covered and the effect of Macau markets can also be integrated in the analysis. The responses from large sized contractors are satisfactory.

**B. Section Two: Causes of Failure**

This section is divided into two parts namely effects of recession and causes of failure. In the first part, the respondents are required to indicate the problems brought by recession. Percentages of the firms responding different levels of effects namely ‘Seriously’, ‘Mild’ and ‘Not at all’ will be calculated so that a quick glance can be taken over the major sources of the problems. In the second part, the respondents are required to rate from 1 to 5 which 1 for the least important and 5 for the most important. 12 sub factors leading to causes of failure categorized into 3 major factors namely macroeconomic conditions, decision within the firm and actions of other firms are listed. Each cause of failure is analyzed separately. A scoring system is used in this part. A mean score is obtained by totaling the score of each benefit of all respondents and dividing it by the total number of respondents.

\[ Sm = \frac{\sum S}{n} \]

Sm: Mean Score   S: Score of each benefit   n: Number of respondents
In the first part, according to the following table (Refer to Table 3.2), a majority of contractors suffered from the decline in domestic sales upon which they had been either seriously or mildly affected. For the rest of the problems except decline in overseas sales, both groups of contractors perceive the effect as mild. For the decline in overseas sales, only a few Group C contractors perceive the effect as mild but no effect was impacted on Group A and B contractors.

<table>
<thead>
<tr>
<th></th>
<th>Seriously</th>
<th>Mild</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group A&amp;B</td>
<td>Group C</td>
<td>Group A&amp;B</td>
</tr>
<tr>
<td>Decline in domestics sales</td>
<td>57% (4)</td>
<td>38% (6)</td>
<td>43% (3)</td>
</tr>
<tr>
<td>Decline in overseas sales</td>
<td>0% (0)</td>
<td>0% (0)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>Excess labour resources</td>
<td>43% (3)</td>
<td>6% (1)</td>
<td>57% (4)</td>
</tr>
<tr>
<td>Excess inventories</td>
<td>0% (0)</td>
<td>18% (3)</td>
<td>86% (6)</td>
</tr>
<tr>
<td>Excess indebtedness</td>
<td>0% (0)</td>
<td>6% (1)</td>
<td>86% (6)</td>
</tr>
<tr>
<td>Cash flow problems</td>
<td>0% (0)</td>
<td>6% (1)</td>
<td>86% (6)</td>
</tr>
</tbody>
</table>

Table 3.2: Percentage of Effect of Recession on Contractors’ Company Performance

The findings reveal that the decline in domestic sales represents the most fundamental problem that had been encountered by both types of contractors. However, for the rest of the problems, although the recession had caused mild extent associated with excess human resources, excess inventories, excess indebtedness and cash flow constraints to the company performance, it is manifest that the main driving forces for these problems is the lack of domestic sales.
In the second part, according to the following figure (Refer to Figure 3.14), among the 12 factors leading to the causes of failure categorized under macroeconomic conditions of the construction industry, decision within the firm and actions of other firms, ‘Decline in the number of invitation to tender’ reach the highest average scores for both types of contractors. ‘Increased competition’ is ranked the second highest and ‘High interest rate’ is ranked the third highest. On the other hand, ‘Expansion of company through mergers and acquisition before 1998’ scores the lowest, followed by ‘Over expansion of range of products and services provided before 1998’.

![Figure 3.14: Average Score of Causes of Failure Rated by Contractors](image-url)

Figure 3.14: Average Score of Causes of Failure Rated by Contractors
The findings reveal that decline in the invitation to tender is the main cause of the problem for both sizes of contractors. The decline in the invitation to tender is categorized under the factor of macoeconomics influence which indicates the underpinning cause of failure for the Hong Kong construction industry. The increased competition is prioritized the second since it is a chain of effect generated by the decline in the invitation to tender. These two effects are consistent with Thorpe and McCaffer (1991) and Langford et al. (1996) that ‘the deep decline in output and orders for the industry, as a consequence of the recession has resulted in the escalation of competition combined with record levels of corporate collapses in the industry.’. The decline in the invitation to tender can be reflected from the decline in the value-added of the construction output to the GDP performed by main contractors from 1998 (HK$69.9b) to 2003 (45.6b) (Refer to Table 1.4). The decline in the invitation to tender leads to intense competitions among the contractors through lowering their profit margin. The outcome of the intense competition can be reflected in the tender price index (Building works tender price index) which has dropped drastically since the peak 1998 and became stable in 2003 (Refer to Figure 1.4). While the cost index (BCI) remains fairly stable for the recession period indicating that there are no other means to lower the wage rates of construction labour and to lower the costs of imported construction materials, increased competition eventually erodes the profit margin of the contractors and makes it a difficult time for contractors to survive. High interest rate is prioritized the third and its impact can be revealed from a high interest rate suffered from the contractors at the early period of recession between 1998 and 2001 (Refer to Figure 2.1).

The cause of failure for the Hong Kong construction industry is similar to the reason for failure for the UK construction industry during 1990s which was characterized
by the intense competition predominantly. Increased competition was triggered by the fall in the construction activities and gave rise to the low profitability ratio for the construction industry. This is best explained by Hillebrandt et al. (1995) who commented that the market condition in the UK construction industry during the recession in the early 1990s was due to the fall in the volume of work. It was found that the contractors sacrificed profits in order to increase their turnover in contracting. Contractors in the UK were even willing to take on work at very low and negative profit in order to maintain cash flow and retain their management. Most of the contractors perceived that adopting a low or even negative mark-up could keep them operating for a period, hopefully until an upturn in prices and workload. If the contractors did not follow the market down, the consequence would be the loss of turnover, staff and incapability to perform works and eventually would result in liquidation.

However, it is not capable of explaining the causes of failure for the Hong Kong construction industry by means of reasons of failure in the UK construction industry during the 1970s and 1980s. For the reasons for failure in the UK construction industry during 1970s, it was predominantly due to poor management of organizations and inflexibility. As reflected in the result of the questionnaire survey, the organizational factors leading to the cause of failure were rated with low scores, showing that Hong Kong contractors possess with more sophisticated practices over management of the firms. Unlike a wide range of markets that could be served in the UK in the 1970s, Hong Kong construction industry has been developed and further opportunities are rare. Chan et al. (2005) commented that since Hong Kong construction has been fully exploited, contractors have to seek opportunities from other regions like Pearl River Delta and to transform into a cross- region or multi-
national enterprise to participate in the global platform.

It is not feasible to explain the cause of failure by referring to the reasons for failure in the 1980s as well. Though there was a fall in the domestic demand and a decline in the overseas opportunities in the 1980s, it was vulnerable to the civil engineering sector as there was a large cut in the public sector expenditure in the infrastructure work (Hillebrandt and Cannon, 1990). The competition for the building sector was not as intense as that of 1990s in the UK and could not represent the overall picture of recession in the Hong Kong construction industry between 1998 and 2003.

C. Section Three: Strategies

Section Three consists of two parts. In the first part, the respondents are required to rate the extent to which the strategies had been successful if they were adopted to combat the recession. A scale of 0 to 5 is used to indicate different level of importance. The same scoring system used in the Section Two is also adopted. The detail of the scale is shown as follows:

<table>
<thead>
<tr>
<th>Action Taken and</th>
<th>Action Taken and</th>
<th>Action Taken and</th>
<th>Action Taken but</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Successful</td>
<td>Moderate Success</td>
<td>Minimum Success</td>
<td>Not Successful</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 3.3: Scale of Rating the Extent to Which Strategies is Successful

Strategies are divided into three parts, namely financial decisions, strategic decisions and cost control. The most common successful strategies rated by both groups belong to the category of strategic decisions, followed by cost control. The scores
for all the items of financial decision rated by both groups are low, indicating the unattractiveness and ineffectiveness in their success rate in overcoming recession.

I) Financial Decisions

According to the following table (Refer to Table 3.4), the low average scores for all items suggest that financial decisions are not commonly adopted by both sizes of contractors and the minimal extent to which it had been successful is perceived by a majority of them as strategies to overcome the recession.

<table>
<thead>
<tr>
<th>A. Financial Decision</th>
<th>Action taken and very successful</th>
<th>Action taken and of moderate success</th>
<th>Action taken and of minimum success</th>
<th>Action taken but not successful</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposal of assets</td>
<td>A&amp;B 0% (0) C 0% (0)</td>
<td>A&amp;B 43% (3) C 50% (8)</td>
<td>A&amp;B 57% (4) C 31% (5)</td>
<td>A&amp;B 0% (0) C 0% (0)</td>
<td>1.86</td>
</tr>
<tr>
<td>Reduce dividend</td>
<td>A&amp;B 0% (0) C 0% (0)</td>
<td>A&amp;B 43% (3) C 44% (7)</td>
<td>A&amp;B 43% (3) C 31% (5)</td>
<td>A&amp;B 14% (1) C 0% (0)</td>
<td>1.71</td>
</tr>
<tr>
<td>Reschedule debt</td>
<td>A&amp;B 0% (0) C 0% (0)</td>
<td>A&amp;B 14% (1) C 25% (4)</td>
<td>A&amp;B 29% (2) C 25% (4)</td>
<td>A&amp;B 0% (0) C 0% (0)</td>
<td>0.71</td>
</tr>
<tr>
<td>Increase short-term borrowing</td>
<td>A&amp;B 0% (0) C 12% (2)</td>
<td>A&amp;B 29% (2) C 25% (4)</td>
<td>A&amp;B 43% (3) C 25% (4)</td>
<td>A&amp;B 0% (0) C 0% (0)</td>
<td>1.29</td>
</tr>
</tbody>
</table>

Table 3.4: Extent to which Financial Decisions is Successful
The extremely low rating of all items of financial decision reveals that hardly can it be classified as successful strategies to overcome the recession. Such a result is consistent with the finding that firms that are less severely affected by the recession do not prefer undertaking this strategy (Geroski and Gregg, 1993). It is financial decisions that help the contractors to cope with imminent problems which are beyond their ability to tackle. However, when a contractor firm starts to move away from the hardest hit and can strengthen its presence in the marketplace, adopting financial decision no longer help to improve the competitiveness of the firms.

Though financial strategies were widely adopted in the UK construction industry during the early 1990s due to intense competition, the reason for its adoption could not be applied to the Hong Kong construction industry. As there were a lot of construction firms in the UK encountering over-expansion in the mid 1980s, a
sudden economic downturn in the late 1980s led to a sharp fall in the profit of these businesses and forced them to dispose assets for the sake of immediate survival. According to Hillerbrandt *et al.* (1995), common assets sold included environmental control, waste treatment, joinery, coal mining, property, leisure and product manufacture. These were the assets that arose from over-expansion in businesses. However, the Hong Kong contractors had not encountered over-expansion through participation in merger and acquisition in other business sectors before the recession during the period between 1998 and 2003 which could be revealed from a low rating of merger and acquisition in the cause of failure section.

Other strategies such as reschedule debt and increasing in short term borrowing receives a low rating because the Hong Kong contractors are cautious in employing debt in the capital structure. A higher leverage implies an increasing risk of bankruptcy. Besides, the low ratings for both items are consistent with Chiang *et al.* (2002) and Chan *et al.* (2005) that contractors in Hong Kong embody a low debt ratio in their capital structure. The low rating for reduction in dividend for Hong Kong contractors can be explained by the fact that not all the contractors are listed in the Hong Kong stock exchange, especially those small sized contractors. As far as firms that are listed in the stock exchange are concerned, problems associated with reduction in dividend include loss of investors’ confidence and difficulties in raising equity capital from the stock market which are similar to the UK construction industry situation during the early 1990s.

II) Strategic Decisions

According to the following table (Refer to Table 3.5), the most common successful strategies for strategic decisions adopted as far as small sized contractors are
concerned, in descending order of preference, are as follows (Refer to Figure 3.16)

Rank 1: Concentrating on core business

Rank 2: Undertaking smaller projects

Rank 3: Improving relationship with subcontractors/ Improving relationship with suppliers

The most common successful strategies for strategic decisions adopted as far as large sized contractors are concerned, in descending order of preference, are as follows

Rank 1: Concentrating on core business

Rank 2: Undertake smaller projects

Rank 3: Diversification into construction related businesses/ Forming Joint Venture

<table>
<thead>
<tr>
<th>B. Strategic Decisions</th>
<th>Action taken and very successful</th>
<th>Action taken and of moderate success</th>
<th>Action taken and of minimum success</th>
<th>Action taken but not successful</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentrating on core business</td>
<td>A&amp;B 57%(4)</td>
<td>A&amp;B 44%(7)</td>
<td>A&amp;B 0% (0)</td>
<td>A&amp;B 12% (2)</td>
<td>3.71</td>
</tr>
<tr>
<td></td>
<td>C 44%(7)</td>
<td>C 44% (7)</td>
<td>C 0% (0)</td>
<td>C 14% (1)</td>
<td>3.63</td>
</tr>
<tr>
<td>Developing overseas market</td>
<td>0% (0)</td>
<td>0% (0)</td>
<td>0% (0)</td>
<td>57% (4)</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>12% (2)</td>
<td>31% (5)</td>
<td>19% (3)</td>
<td>6% (1)</td>
<td>1.75</td>
</tr>
<tr>
<td>Decision</td>
<td>Obs 1</td>
<td>Obs 2</td>
<td>Obs 3</td>
<td>Obs 4</td>
<td>Obs 5</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Merge/ acquire another company</td>
<td>0%</td>
<td>0%</td>
<td>14%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>Diversification into other construction related businesses</td>
<td>0%</td>
<td>31%</td>
<td>0%</td>
<td>19%</td>
<td>0%</td>
</tr>
<tr>
<td>Change marketing strategies</td>
<td>14%</td>
<td>19%</td>
<td>0%</td>
<td>37%</td>
<td>29%</td>
</tr>
<tr>
<td>Forming joint venture</td>
<td>0%</td>
<td>25%</td>
<td>14%</td>
<td>31%</td>
<td>0%</td>
</tr>
<tr>
<td>Introduce Innovations</td>
<td>0%</td>
<td>6%</td>
<td>14%</td>
<td>31%</td>
<td>43%</td>
</tr>
<tr>
<td>Undertaking smaller projects</td>
<td>43%</td>
<td>25%</td>
<td>43%</td>
<td>44%</td>
<td>0%</td>
</tr>
<tr>
<td>Improving relationship with clients</td>
<td>43%</td>
<td>0%</td>
<td>29%</td>
<td>56%</td>
<td>14%</td>
</tr>
<tr>
<td>Improving relationship with subcontractors</td>
<td>43%</td>
<td>6%</td>
<td>43%</td>
<td>56%</td>
<td>0%</td>
</tr>
<tr>
<td>Improving relationship with suppliers</td>
<td>43%</td>
<td>6%</td>
<td>43%</td>
<td>50%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 3.5: Extent to which Strategic Decisions is Successful
Improving relationship with suppliers

Improving relationship with subcontractors

Improving relationship with clients

Undertaking smaller projects

Introduce innovations

Forming joint venture

Diversification into construction related businesses

Change marketing strategies

Merge/ acquire another company

Developing overseas market

Concentrating on core businesses

Figure 3.16: Strategies Decisions Rated by Contractors
‘Concentrating on core business’ is the most common successful strategies adopted by both small sized and large sized contractors. It is similar to the UK construction industry situation using this strategy as a means to combat recession in the early 1990s. It can be explained by the same market condition that focusing on a particular segment of the total market is more beneficial than trying to compete on an industry-wide basis. It is found that these respondents rating this item as the most common successful strategy do not expand their business in other fields with the use of merger and acquisition. The results are consistent with that of UK construction industry situation in the 1990s without any expansion in other business sectors which could be explained by the lack of internal resources, lack of experience in managing other businesses and the incapability to undertake the risk level in other businesses. As far as immediate survival is concerned, it is necessary for them to rebuild the strength in the core business by concentrating on their specialist activities.

However, it is inconsistent to the strategies adopted to encounter the recession in the UK construction industry during the 1970s and the 1980s. The reason is that there were still cash-hungry sectors available that construction firms could capture to counteract the recession in the construction sector and did not necessarily need to focus on core business for the sake of survival.

‘Undertaking smaller projects’ is the second most common successful strategies adopted by both small sized and large sized contractors. Such popularity can be reflected from the drop in the volume of large projects during recession between 1998 and 2003 and an increase in the volume of smaller projects such as repair and maintenance. It is similar to the UK construction industry situation using this
strategy as a means to combat recession in the early 1990s. The reason is that the competition was so intense for both construction industry environments that larger contractors had to bid for the smaller projects to increase the turnover for the sake of survival in such a hostile environment. Applying the same logic in the Hong Kong construction industry, it is getting more important for large sized contractors to undertake smaller project as such a strategy can help to maintain the cash flow and retain the business during recession.

However, it is inconsistent to the strategies adopted in the UK construction industry to encounter the recession during the 1970s and the 1980s because both market environments in these two periods were not as intense as that of the 1990s without the need for large sized contractors to undertake smaller projects.

‘Improving relationship with subcontractors’ and ‘Improving relationship with suppliers’ are the third most common successful strategies adopted by small sized contractors while ‘Diversification into construction related businesses’ and ‘Forming Joint Venture’ are the third most common successful strategies adopted by large sized contractors.

As revealed in the effects of problem caused by recession, small sized contractors are more prone to the cash flow problems than that of large sized contractors. Therefore, it is necessary for them to build up competitive edge by means of the use of improving relationship with subcontractor and supplier in order to enhance the cost efficiency and thereby prevent the cash flow problem from emerging. Obtaining credits from subcontractors and suppliers is considered as another important element by the contractors to improve the cash flow which can be achieved by maintaining
good relationship with them (Jaafar et al., 2006). However, the strategy of improving relationship with subcontractors and suppliers cannot be explained by the environment of the UK construction industry as the relationship was perceived as short-lived by the contractors. Since short-lived relationship was not sufficient enough to build up competitiveness, they tended to concentrate on other possible strategies to ensure survival.

The third successful strategies adopted by large sized contractors are diversification into construction related businesses as well as forming joint venture. The strategy of diversification in construction related businesses adopted by Hong Kong contractors cannot be explained by reasons for strategy to be adopted in the UK construction industry. The reasons for UK construction firms to undertake diversification strategy during 1970s were to take advantages of profitable sectors to counteract the poor construction industry environment, to ensure stable sources of supply as well as to seize more land by the housebuilding sector as a result of low acquisition cost. However, these reasons are incapable of explaining the motives for the Hong Kong contractors to implement diversification strategy. Firstly, if this strategy had successfully achieved the purpose of counteracting the poor construction environment, this strategy would have been pursued during the 1990s in the UK construction industry. However, the reality was that UK contractors chose to focus on the core business in the 1990s. Some studies (Ibrahim and Kaka, 2007; Hillebrandt, 1996) even indicated that diversification in construction related businesses did not help improve the performance of the UK construction firms. It revealed that the extent to which ‘to counteract the poor construction environment’ is successful is not persuasive. Secondly, the Hong Kong contractors do not experience a shortage of building materials and does not need to rely on this strategy
to secure stable sources of supply. Thirdly, the contractors in Hong Kong are not speculative in nature and do not perform the functions of housebuilding sector in UK such as selling the finished products and purchasing the land. They do not need to take advantage of low acquisition cost in order to build up landbank. The only reason to explain its popularity of the diversification in the construction related businesses in the Hong Kong construction is that it aims at providing a variety of business to clients and this strategy is perceived as growing importance in terms of client requirement and expectation. In conjunction with the traditional services, other related services Hong Kong contractors can diversify include design and build, construction management, value management, project management and facilities management. It can be observed that numerous large sized contractors undertake these functions. The reason for its popularity among large sized contractors is that they can make use of their expertise and resources available to diversify in other construction related services in order to complement and strengthen the core business. In the long term, competitiveness can be built up to ensure survival under the poor construction environment.

The strategy of joint venture can be explained by reasons for strategy adopted in the UK construction industry to combat recession in the early 1990s. It is because the clients’ needs can be better addressed by forming joint venture, especially for those large scale projects and tapping into expertise with another joint venture partner can increase the likelihood to secure workload of large scale projects under recession. As large sized contractors are affordable to undertake larger project, they are willing to seek very large projects through the use of joint venture as well as taking other advantages such as the risk-sharing. The presence of the resources constraints also distinguish a low popularity of this strategy adopted by small sized contractors.
III) Cost Control

According to the following table (Refer to Table 3.6), the most common successful strategies for cost control adopted by both sizes of contractors, in descending order of preference, are as follows (Refer to Figure 3.17)

Rank 1: Reduce headquarters’ cost
Rank 2: Reduce employment
Rank 3: Reduce wage growth

<table>
<thead>
<tr>
<th>C. Cost Control</th>
<th>Action taken and very successful</th>
<th>Action taken and of moderate success</th>
<th>Action taken and of minimum success</th>
<th>Action taken but not successful</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A&amp;B</td>
<td>C</td>
<td>A&amp;B</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Close Establishment</td>
<td>0% (0)</td>
<td>6% (1)</td>
<td>14% (1)</td>
<td>31% (5)</td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.38</td>
</tr>
<tr>
<td>Reduce Headquarters’ Cost</td>
<td>0% (0)</td>
<td>25% (4)</td>
<td>57% (4)</td>
<td>50% (8)</td>
<td>2.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.94</td>
</tr>
<tr>
<td>Layoff employees</td>
<td>0% (0)</td>
<td>25% (3)</td>
<td>29% (2)</td>
<td>44% (7)</td>
<td>1.57</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.43</td>
</tr>
<tr>
<td>Reducing wage growth</td>
<td>0% (0)</td>
<td>25% (4)</td>
<td>43% (3)</td>
<td>44% (7)</td>
<td>1.86</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.69</td>
</tr>
<tr>
<td>Reducing employment</td>
<td>0% (0)</td>
<td>25% (4)</td>
<td>57% (4)</td>
<td>44% (7)</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.75</td>
</tr>
</tbody>
</table>
Table 3.6: Extent to which Cost Control is Successful

<table>
<thead>
<tr>
<th>Increase in the use of subcontracting</th>
<th>0%  (0)</th>
<th>0%  (0)</th>
<th>29%  (2)</th>
<th>25%  (4)</th>
<th>71%  (5)</th>
<th>31%  (5)</th>
<th>0%  (0)</th>
<th>0%  (0)</th>
<th>1.57</th>
<th>1.06</th>
</tr>
</thead>
</table>

The reason for a slightly lower average scores of all the items in this part than that of the strategic decisions is that cost-control strategy has received a lot of attention in the construction nowadays. Since most of the contractors, irrespective of its size, could maintain their operation at a reasonable low cost, this strategy ceased to be a key strategy to be successful in overcoming the recession as only a little competitive edge could be developed.
Such a strategy can be explained by the strategy adopted by the UK construction industry during the early 1990s. Due to intense environment, the contractors have to rely on cost-cutting measures in order to survive in the market. The construction firms in Hong Kong during the period between 1998 and 2003 also encounter the similar situation. However, the extent to how extensive these measures are implemented is subject to further evaluation. What can be observed from the results is that there is a hierarchy of responses from the contractors, irrespective of their size. Both small sized and large sized contractors show a higher preference over the reduction in cost of organization and wage payment of labour issues. Other items such as layoff employees and close establishments receive relatively lower attention. The pattern of the response shows that the Hong Kong contractors do not rely on short sighted cost cutting measures and the result of higher ratings of ‘reducing headquarters’ cost’, ‘Reduce employment’ and ‘Reduce wage growth’ justifies that it is necessary to preserve longer run competitiveness by not scaling back the organization and workforce in order to successfully overcome the recession in the construction industry. Besides, the lower rating of ‘Increase in the use of subcontracting’ indicates that it is not a successful measure. Despite the fact that it was widely adopted by the UK contractors during the late 1980s and early 1990s to combat the recession, the same strategy could not be applied in Hong Kong as profit margins of the mark-up are razor thin and there are limited rooms for reduction in cost through sub-contracting (Chiang et al., 2001).

IV) Investment Plan

In the second part of Section Three, the respondents are required to indicate the changes in the investment plan. Percentages of the firms responding changes in investment plans with regards to ‘Abandoned’, ‘Postponed’ and ‘Brought forward’
are calculated. According to the following table (Refer to Table 3.7), it can be seen that a majority of Group A and B Contractor abandoned and postponed all the items, except that 1 contractor brought forward the item of training staff. For Group C contractor, a majority of contractors prefer postponing all the items and there are a few of them choosing the action of ‘Abandoned’ and ‘Brought Forward’. There are 3 contractors from Group C bringing forward the investment in plant machinery, R&D and advertising/marketing. For the item of training staff, there are 7 contractors from Group C choosing this item.

<table>
<thead>
<tr>
<th></th>
<th>Abandoned</th>
<th>Postponed</th>
<th>Brought Forward</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A&amp;B</td>
<td>C</td>
<td>A&amp;B</td>
</tr>
<tr>
<td>Investment in plant/</td>
<td>57% (4)</td>
<td>12% (2)</td>
<td>43% (3)</td>
</tr>
<tr>
<td>machinery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment in R&amp; D</td>
<td>57% (4)</td>
<td>19% (3)</td>
<td>14% (1)</td>
</tr>
<tr>
<td>Investment in</td>
<td>57% (4)</td>
<td>25% (4)</td>
<td>43% (3)</td>
</tr>
<tr>
<td>Advertising/ marketing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>expenditure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training staff</td>
<td>43% (3)</td>
<td>0% (0)</td>
<td>43% (3)</td>
</tr>
</tbody>
</table>

*Table 3.7: Changes in Investment Plan*

Further data (Refer to Table 3.8) is collected related to the extent of success that the investment has been brought forward. According to the following table (Refer to Table 3.8), both groups respond the item of training staff as a successful strategy, with 1 contractor from Group C rating it as very successful, 1 contractor from Group A and B and 6 contractors from Group C rating it as moderate successful. For the remaining items of investment in plant/machinery, investment in R&D and
investment in advertising/marketing expenditure, only Group C contractors respond to this item and the extent to which it had been successful is either moderate or minimum.

<table>
<thead>
<tr>
<th></th>
<th>Brought forward and very successful</th>
<th>Brought forward and of moderate success</th>
<th>Brought forward and of minimum success</th>
<th>Brought forward and not successful</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A&amp;B C</td>
<td>A&amp;B C</td>
<td>A&amp;B C</td>
<td>A&amp;B C</td>
</tr>
<tr>
<td>Investment in plant/machinery</td>
<td>0% (0) 0% (0)</td>
<td>0% (0) 6% (1)</td>
<td>0% (0) 12% (2)</td>
<td>0% (0) 0% (0)</td>
</tr>
<tr>
<td>Investment in R&amp;D</td>
<td>0% (0) 0% (0)</td>
<td>0% (0) 6% (1)</td>
<td>0% (0) 12% (2)</td>
<td>0% (0) 0% (0)</td>
</tr>
<tr>
<td>Investment in Advertising/marketing expenditure</td>
<td>0% (0) 0% (0)</td>
<td>0% (0) 6% (1)</td>
<td>0% (0) 6% (1)</td>
<td>0% (0) 6% (1)</td>
</tr>
<tr>
<td>Training staff</td>
<td>0% (0) 6% (1)</td>
<td>14% (1) 37% (6)</td>
<td>0% (0) 6% (1)</td>
<td>0% (0) 0% (0)</td>
</tr>
</tbody>
</table>

Table 3.8: Extent to which Investment Plan is Successful

Nearly all large sized and small sized contractors abandoned and postponed their investment plan in plant and machinery, R&D and marketing expenditure. Even if companies brought forward the above investment schemes, the extent of success in overcoming recession for most of the investment schemes was found minimal. Investment on training staff is found to be common among large sized and small sized contractors relative to other investment decisions such as plant and machinery, R&D and marketing expenditure. The effect is found to be moderately success.
The reason for minimal success in undertaking investment plan in plant and machinery is that it has to coincide with an expansion of work so that all the purchased assets are fully utilized. During the downturn environment, positive cash flow reduces which outstrips their capacity to finance it. At the same time, new market opportunities are rare and the construction activities in local market keep shrinking. Therefore, an expansion in the fixed asset is not justifiable. Besides, it is suggested that other measures such as buying on hire purchase, leasing or hiring appear to be more attractive to contractors as less capital is needed and more effective control over the use of capital can be brought (Hillebrandt, 1984). All these reasons help to explain why contractors abandon and postpone their investment in plant and machinery during the recession.

The reason for minimal success in undertaking investment plan in R&D because most of the respondents specialize in building construction. Hardly can the contractors search for any niche market to develop in the building sector. Investment in R&D brings relatively little competitive edge to the contractors and therefore building contractors are generally not interested in pursuing this kind of investment. Only building material sectors are interested in pursuing this investment for the sake of improvement in production efficiency and pursuant of low production cost (Hillebrandt, 1984). As far as those large sized local contractors with specialization in civil engineering sector are concerned, it is extremely difficult for them to compete with the technologically and financially superior foreign contractors in the international level (Walker, 1995). There is a huge technological gap between building and civil engineering construction. To acquire a comparable level of technological competence as that of foreign contractors, huge investment in R&D is required by the local contractors. Instead, they tend to seek other less-costly
methods to gain access to advanced technologies through joint ventures or partnering arrangement (Ching et al., 2001). Also, it is costly to perform R&D investment. Considering a downturn environment, insufficient capital imposes impediment to implement in the investment. The only contractor who finds moderate success in R&D investment performs in international level and keeping R&D investment can help to sustain its competitiveness around the world.

The reason for minimal success in undertaking marketing expenditure investment is that a majority of contractors do not intend to develop another market in overseas during recession. As revealed from the previous result of a low rating in the item ‘overseas market’ under strategic decisions, the reason behind is that it is too risky for implementing this strategy due to uncertainty in the market i.e. unstable political environment. Also, the contractors suffering from a shortfall in cash flow do not have sufficient capital to develop another market which necessitates a huge expenditure over establishment of another headquarter expansion of assets and human capital. The need to devote expenditure in marketing for entry into new market is therefore abandoned or postponed. The predominant strategy among contractors upon ‘concentrating on core business’ further justifies that contractors do not opt for developing overseas market and the marketing expenditure is not an essential expenditure. Another reason for its unpopularity can be attributed to the overwhelming use of traditional procurement approach over the building projects in the Hong Kong construction industry. Unlike the public housing or civil engineering sectors, most of the building projects are tendered using traditional procurement approach and contractors resort to cost reduction as a means for competition (Chiang et al., 2001). It reduces the need for the contractors to invest in marketing in terms of offering package deal and additional services in order to satisfy the clients’ needs.
The effect of investment on training staff is found to be moderately success in overcoming recession. This reveals that investment in human capital can help to strength the long run competitiveness which is positive in terms of helping the construction firms to overcome the recession. As revealed from the previous result of a low rating in the redundancy under the cost control, it highlights the importance of preserving human capital which can help the firms to sustain the company’s competitiveness. From the perspective of management, dissatisfaction over management training can cause resentment over the staff due to neglect of one’s personal growth, resulting in a higher turnover experienced by the firms. It is observed that in the majority of companies, there was a long term serious commitment to training and management development in all parts of the organization (Hillebrandt et al., 1990). The reasons for its popularity can be attributed to its relatively low expenditure and the preservation of manpower which is considered as essential for survival during recession.

D. Section Four: Follow-up Interview

In the last part, the respondents are asked whether they are available for further enquiry or interview. If available, the email will be requested for further arrangement of the interview details. Among the 23 respondents, two of the respondents are available for face-to-face interview. For the remaining respondents, enquiry will be made by phone. The details of the interview are discussed in the next chapter.
CHAPTER FOUR
CHAPTER FOUR
FOLLOW-UP INTERVIEWS

4.1 Introduction

In the previous chapter, the causes of failure and the common successful strategies adopted by different sizes of contractors are discussed based on the data obtained from the questionnaire survey.

Based on the findings from the questionnaire survey, follow-up interviews are conducted in order to have a deeper understanding about how these common successful strategies can lead to the survival of firms during recession. The considerations of factors in undertaking these strategies, strengths and weaknesses, experiences as well as obstacles in undertaking these strategies are discussed. Three interviews are conducted. Two of them are face-to-face interviews and one is a telephone interview.

4.2 Objectives of the Follow-up Interviews

The objectives of the follow-up interviews are as follows:

1. To follow up the experiences and the effectiveness of how the successful strategies can lead to the survival of firms during recession based on the result collected from the questionnaire survey.

2. To have a deeper investigation about the implementation of these strategies in terms of strengths and weaknesses and potential obstacles involved in these policies.
4.3 Format of the Follow-up Interviews

Two face-to-face interviews are conducted with large sized contractors. One telephone interview is conducted with another large sized contractor. The two face-to-face interviews lasted around 35 minutes and the phone interview lasted about 20 minutes.

A semi-structured format is adopted. Some guiding questions were set before the interview and sent to the contractors before the interview in order to generate a more in-depth discussion during the interviews. Depending on the response of the interviewees, some follow-up questions were asked. Interaction was enhanced between the interviewer and the interviewee.

4.4 Findings of the Follow-up Interviews

A. Interview 1: Successful Strategies in response to Recession Adopted by Shui On Construction Co. Limited

Interviewee: Mr. Au Choi Wa

Position: Director

Company: Shui On Construction Co. Ltd

Format of Interview: Face-to-face interview

In the questionnaire, Mr. Au perceived concentrating on core business, undertaking smaller projects, forming joint venture and investment in training on staff as the most successful strategies to cope with the recession. Detailed discussion was carried out in the following four aspects.
I) Perspective towards concentrating on core business

Mr. Au said that the company has no intention to develop any business that is not related to construction no matter in the boom or recession period. The reason is that the company is not good at managing other businesses. It will be too risky if acquisition with another non-core business is done during recession as there are a lot of uncertainties.

II) Perspective towards undertaking smaller projects

Mr. Au said that it is popular among contractors to undertake smaller projects during a sluggish economy. The opportunities for availability of these contracts in the market are numerous and the awarding contracts could help the contractors to acquire additional cash flow which are crucial for retaining their operations in the local market. Despite a lower value of these projects compared to those large building and infrastructure projects, his company is industrious in approaching and maintaining relationship with clients such as prestigious developers and government institutions who possess a large portfolio of building assets in the market.

Reviewing the policy of the company during the period between 1998 and 2003, Shui On was active in bidding smaller projects such as renovation and fitting out projects. Their target customers were concentrated on large and institutional clients. For example, the major fitting out works came from Standard Chartered Bank, Hong Kong Jockey Club and Hong Kong’s Chek Lap Kok Airport. The major renovation works came from Hong Kong Land Group and MTRC. Other contracts included refurbishment for the Li and Fung Group headquarters. Some projects were even awarded with above $60 million in contract sum which helped to safeguard the company’s position in the marketplace.
Despite the seemingly promising prospect in this sector, the competition over this sector was getting more and more intense during 2000s. Starting from year 2000, Shui On experienced a decline in the total value for renovation and fitting out projects. There were other large contractors who submitted lower tender price for these projects, causing the maintenance and repair sector more competitive. Besides, since all the property, banking, finance, retail and entertainment sectors suffered from the downturn in the economy, very few businesses, institutions and public organizations were willing to commit large sums on renovation and fitting out works. Therefore, contracts of reasonable large size were very limited. He suggested that the company has to be cost competitive in order to secure these types of contracts.

III) Perspective towards forming joint venture

Mr. Au said that Shui On shifted its strategic location from Hong Kong to mainland during the 2000s in order to maintain long term and sustainable growth. Before the recession that hit Hong Kong in 1997, Shui On Construction and Materials Ltd developed cement production and property development in mainland China and the effect of recession resulted in its repositioning of Hong Kong market to mainland China market. The reason was that the company anticipated a decline in the margin of the Hong Kong construction industry due to fiercer competition and there was an increasing demand for high quality construction materials for the central and western regions of the Chinese Mainland.

Mr. Au said that the expansion in the cement production in the mainland China helped to improve the profitability of the business. The demand of cement in these two strategic locations continued to be boosted by numerous major infrastructure and housing project. Though the profit contributions of the cement business were
small, he perceived the business as one of the fastest growing business which allowed them to establish a strong foothold in China’s resource-rich hinterland. The continuous expansion of the business helped to offset the decline in the local market and bridge the profit gap of the company which was found successful as a strategy adopted to survive their business during recession.

One of the mission statements for the company during the recession was to emerge as a sizeable cement group in the central and western provinces. Apart from the developed cement production market in Chongqing, the company expanded the production line in Guizhou and Nanjing province by actively using joint venture method. In 1998, in order to acquire Nanjing cement production market, joint venture agreement was signed with two Nanjing cement producers. In 2001, the company established a joint venture with another cement plant in Zunyi to further capture the strategic location of Guizhou. The reason for adopting the joint venture approach was that the Asian financial crisis has prompted the company to take a more conservative approach in their investment over cement production and there was a tendency for over-supply of cement production in the Asian market at that time. Merging of cement plant required considerable amount of working capital and resulted in higher risk. Facing with uncertainties, joint venture approach provided a good means of securing the market of targeted provinces resulting with less risk and capital and therefore was adopted.

IV) Perspective towards investment in training staff

Mr. Au said that staff were important assets of the company and commitment of staff in wholeheartedly working for his company was important, especially during a downturn environment. He said that Shui On dedicated to provide training and the
opportunity for development to staff. Their company undertook aggressive development plans in the mainland during the recession and without these dedicated and motivated staff these plans would not be found possible. In the aspect of personnel management, its strategy is to attract, retain and develop local talent to take up leadership roles in the future.

There were personal development and team building programmes targeted on the management trainees. Other training courses included sponsoring employees to participate in external courses and organizing overseas visits for them to gain international exposure and keep abreast of the latest technologies and practices in their respective industry. Training expenditure was concentrated on the management trainee programme which provided job rotation placements, personal development and management courses. The outcome of the training programme was found successful in terms of building up their leadership skills, ensuring growth of the company and developing a loyal workforce to strive for the company’s strategic business development. Mr. Au said that recession might lead to a cut in the number of recruitment of management staff but the expenditure of training would not be cut for the sake of promoting the company’s strategic development.
B. Interview 2: Successful Strategies in response to Recession Adopted by Chun Wo Construction & Engineering Co. Ltd

Interviewee: Mr. Derrick Pang
Position: Director
Company: Chun Wo Construction & Engineering Co. Ltd
Format of Interview: Face-to-face interview

In the questionnaire, Mr. Pang perceived concentrating on core business, undertaking smaller projects, forming joint venture, diversification into construction-related businesses and investment in training staff as the most successful strategies to cope with the recession. Detailed discussion was carried out in the following five aspects.

I) Perspective towards concentrating on core business

Though diversification was one of the core activities in the company, Mr. Pang said that the company had no interests in acquiring other businesses due to lack of knowledge in other fields and the need to invest huge capital. Its rapid expansion in construction-related businesses was mainly executed in the boom period between 1990 and 1995 such as the establishment of Chun Wo Foundations Ltd and Chun Wo (China) Ltd because of sufficient working capital and resources. During recession between 1998 and 2003, there was only one diversification strategy targeted in Electrical and Mechanical sector (E&M). The diversification was much more conservative compared to the past and did not require much capital, implying less risk. In general, the strategy of concentrating on core business was reinforced so that they could focus on their core business such as building and civil engineering
functions of the company for better performance.

II) Perspective towards undertaking smaller projects

Mr. Pang said that the company undertook smaller projects during the recession period between 1997 and 2003. The major clients included the public utilities such as Water Supplies Department, Highway Departments and Hong Kong International Airport. Their past experience and good records in highway and transportation enabled them to benefit from the highway projects. There were also tenders for minor works such as roads and drainage work awarded to their company as they specialized in the civil engineering field and their expertise was highly recognized by the clients in the market.

Mr. Pang was optimistic about the market for smaller projects as Hong Kong was a fast growing economy and the steady increase in the living standards have created a demand for smaller projects such as fitting out works as well as maintenance for public works. He was also positive towards the securing of smaller projects during the recession because they were experienced in maintenance and improvement work which could meet the demand for both public and private sectors. There was no obstacle in implementing this strategy in general but he perceived that the competition was intense for fitting out work due to the keen competition among relatively large sized building contractors.

III) Perspective towards forming joint venture

Mr. Pang said that Chun Wo joined forces with a number of international contractors to tender for and undertake construction works. During recession, one civil engineering project offered by West Rail was successfully awarded based on joint
venture approach which guaranteed adequate workload for the entire recession period. The strategy of joint venture was found successful in ensuring survival during the recession in the construction industry.

The works comprised the construction of Tin Shui Wai Station including all foundations and associated works, footbridges, roads, utilities, CLP Traction Power Feeder Substation, KCRC Plantroom, covered walkway and noise barriers at Tin Shui Wai along Tin Yiu Road and other ancillary buildings. The contract sum for this civil engineering project was HK$1,523 million which was awarded to Chun Wo- Fujita- henryvicy JV. Chun Wo held 50% of the share of the joint venture. The contract commencing date was on August 1999 and completed in October 2003.

Apart from ensuring survival during the economic downturn, Mr. Pang said that the joint venture policy enabled the company to widen the Group’s exposure to a broad spectrum of technical and managerial experience and some technological transfers. His consideration for forming joint venture was to look for right joint venture participants in order to create complimentary and synergistic strengths which provided advantages over a price competitive edge and resulted in securing of the project. Commitment and trust was also found to be important in maintaining relationship among the joint venture participants which was essential for the success of the joint venture strategy.

IV) Perspective towards diversification into construction related businesses

Mr. Pang said that the company is an investment holding company with subsidiaries principally engaged in civil engineering, electrical and mechanical engineering, foundation and building construction work and property development. With respect
to the diversification strategy undertaken during recession, Chun Wo Electrical and Mechanical Engineering Ltd was established in 1998 shortly after Asian Financial Crisis to undertake electrical and mechanical works. Services provided to their clients included E&M contracts in air conditioning, electrical installation, fire services as well as building services installation. He observed that the proportion of building services in building works keeps rising due to the increasing complexity of building services installation and diversification into this sector has rooms for additional revenues to be generated.

Mr. Pang observed diversification in construction related businesses as successful strategy as the diversified business offered subsidiary services to meet the demand of the clients under various projects in civil, building and alteration work. There were no major obstacles found in implementing this strategy in general. The coordinated support of Electrical and Mechanical team to the building team was found satisfactory and facilitated the smooth running of these projects, especially in the project of Tin Shui Wai Station. Mr. Pang also believed that clients’ requirement kept changing and there was a need for developing a variety of businesses to meet the interests of the clients. With more diversified operations, Mr. Pang was confident that Chun Wo was capable of providing one-stop design and build services to clients from foundation construction to completion for occupation and enjoyed cost competitiveness in securing future workloads over its major competitors during recession.

V) Perspective towards investment in training staff

Mr. Pang said that Chun Wo recognized their employees as valuable assets of their company. During recession, they insisted on not cutting the training expenditure on their staff as they were committed to investing in people to enhance their skills and
knowledge which was fundamental for long term growth of the company. If the staff did not receive training, they would soon switch to another company and the high turnover of the employees would affect the company performance.

To build up their commitment towards their company, Elite Training programme had been launched since 2000 which offered training to develop young engineers and quantity surveyors and provided the opportunities to them to experience all aspects of construction, from design to project management to commercial management. The goal of the programme was to develop these talents to become future leaders of Chun Wo. This programme was reviewed year by year and it was found successful in terms of building up a loyal workforce to strive for the company’s goals during recession.
C. Interview 3: Successful Strategies in response to Recession Adopted by Leighton Contractors (Asia) Ltd

Interviewee: Mr. Alfred Leung
Position: Strategic and Development Director
Company: Leighton Contractors (Asia) Ltd
Format of Interview: Phone interview

In the questionnaire, Mr. Leung perceived focusing joint venture and investment in R&D as the most successful strategies to cope with the recession. Detailed discussion was carried out in the following two aspects.

I) Perspective towards forming joint venture

Mr. Leung found the strategy of forming joint venture successful in overcoming the recession during the year between 1998 and 2003. He said that joint venture with good participants not only secured the workload during recession, but also resulted in an attractive return since the contract was of large size and involved huge amount of contract sum.

Reviewing the company policy of Leighton (Asia) Contractors Ltd during the recession period, their company undertook a $225 million contract as part of the Tseung Kwan O line extension in joint venture with China State Construction and Engineering Corporation. The contract value was $1.2 billion. The project started from March 1999 and ended in June 2002. The contract included the construction of an underground station, two cut and cover tunnels, a public transport interchange and associated work. He further added that Leighton (Asia) Contractors Ltd was
experienced in constructing civil engineering work and the purpose of forming joint
was partly to diversify the risk since civil engineering work involved lots of
uncertainties giving rise to higher risk and also to rely on the expertise of another
company as a means of secure the workload during recession. The company chose
China State Construction and Engineering as the joint venture partner because China
State was well-known for its sustainable construction and was able to satisfy the
client of the project- Mass Transit Railway Corporation (MTRC) who focused much
on the environmental work of this project. The joint venture company was praised for
a wide range of environmental measures adopted in the project such as the application
of environmental and noise management plan. Mr. Leung attributed trust and
consistency between their good to the success of implementation of joint venture.

Another joint venture was formed with Rail Services Australia (RSA) to gain the rail
trackwork contract in Hong Kong for the Kowloon Canton Railway Corporation in
September 1999. The contract sum was $750 million and Leighton’s share was
HK$600 million. The contract involved the detailed design and installation of
approximately 54 kilometres of trackwork from Nam Cheong station to Kam Sheung
Road station. The contract started in late 1999 and completed in October 2003.

Mr. Leung commented that the secure of second JV project on hand was able to
provide additional boost to the company’s workload in Hong Kong and the contract
sum for the two projects was large enough to secure their position in the marketplace
in the Hong Kong construction industry during recession. Mr. Leung was also
positive towards the prospect of civil engineering work in the coming future as Hong
Kong government announced the major infrastructure programme to boost the
economy and the company would make use of the same strategy to secure workload
II) Perspective towards investing in R&D

Mr. Leung said that it was necessary to invest in R&D continuously in order to maintain the competitiveness as a leader in the civil engineering field.

During recession, the company did not cut the expenditure on R&D. The company was committed to providing value for their clients and applied continuously the technology in different projects such as the technique of directional drilling technique of pipeline for the Ma Wan Channel project and the use of tunnel boring machines for Tai Po aqueducts. Other technology applied included the innovative ‘jump form’ method for Tin Shui Wai Area 110 Phase 4 projects, Tse Oi Estate Phase 4 project and Fanling Area 49A Phase 3 project which led to cost efficiency and higher productivity during the construction. Mr. Leung stated that all these technology was fundamental in achieving the value for the clients and helped to enhance the long term development of the company by increasing the likelihood of securing future workload for the company. Therefore, continuous investment in R&D was executed.
4.5 Summary of the Findings from Follow-Up Interview

Judging from the presented evidence, the reasons for adoption for different successful strategies adopted by different large sized contractors are summarized as below (Refer to Table 4.1).

<table>
<thead>
<tr>
<th>Focus on core business</th>
<th>Shui On Construction Co. Ltd</th>
<th>Chun Wo Contractors Ltd</th>
<th>Leighton Contractor (Asia) Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not keen in acquiring other non-core businesses due to lack of experience and not affordable to undertake the risk</td>
<td>Not keen in acquiring other non-core businesses due to lack of experience and working capital; Rapid diversification in construction-related businesses may disrupt the performance in core-business due to dispersion of resources</td>
<td>N.A.</td>
</tr>
<tr>
<td>Undertaking small projects</td>
<td>Improving cash flow</td>
<td>Improving cash flow</td>
<td>N.A.</td>
</tr>
<tr>
<td>Diversification into construction-related businesses</td>
<td>N.A.</td>
<td>To strength the core business by providing a wide range of services to the clients</td>
<td>N.A.</td>
</tr>
<tr>
<td>Forming joint venture</td>
<td>A means of rapid expansion in China’s market in the cement production sector due to reduction in risk</td>
<td>Securing large value contracts and taking advantages of synergy effects as well as technological transfer</td>
<td>Securing large value contracts and making use of joint venture partner’s expertise</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Investment in training staff</td>
<td>Permit long term development</td>
<td>Permit long term development</td>
<td>N.A.</td>
</tr>
<tr>
<td>Investment in R&amp;D</td>
<td>N.A.</td>
<td>N.A.</td>
<td>Enhancing competitiveness in the civil engineering market by increasing value to the clients and taking advantages of cost competitiveness.</td>
</tr>
</tbody>
</table>

Table 4.1: Summary of the Findings from Follow-up Interviews
4.6 Discussion of the Results of Follow-up Interviews

To summarize, nearly all large sized firms adhere to the principle of concentrating on core business and undertaking smaller projects during recession. The benefits of these strategies are highlighted in terms of elimination of risk and ensuring steady workload respectively.

Another observation is that there is a tendency for large sized contractors to add value to the clients by adopting diversification into construction related businesses. Cost competition is no longer the criteria for awarding the tender to contractors. Partly due to the increasing clients’ need over quality and the increasing trend for clients to adopt quality led procurement for contractors’ selection, a shift from cost competitiveness to quality issues addresses the imminent need for large sized contract to diversify into construction related businesses as a means for realizing the clients’ value and maintaining competitiveness in order to ensure survival during recession.

Joint venture strategy seems to benefit those contractors with operations in civil engineering sector as these large value projects are associated with civil engineering construction. Together with the potential benefits of risk- sharing, it appears to be a common successful strategy adopted by those contractors specializing in civil engineering sector.

Expenditure on investment on staff is retained for all large sized firms. It is important in the sense that company goals can be realized more easily and obstacles of affecting company’s performance can be eliminated. Investment in R&D is designated for those contractors who aim to become a competitive international
contractor. This strategy is mainly targeted to those ambitious civil engineering contractors as a way for maintaining competitiveness in the international level.
CHAPTER FIVE
CHAPTER FIVE
CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion of this Research

A. Objective 1: To review the causes of failure of contractors in the UK during times of recession.

In this dissertation, the cause of failure for contractors in the UK is reviewed in the literature review in chapter two. The years that are studied cover from the 1970s to the 1990s. Different causes of failure are identified in different periods.

In the 1970s, there were lots of market opportunities that contractors could take advantage of and the cause of failure related to organization factors in terms of poor management. These factors attributed to higher cost of operations which could turn a profitable firm into significant loss. Possible explanations behind included the inexperience of the contractors in the UK construction industry given that most of the firms were small-sized family businesses.

In the 1980s, economic factors as the cause of failure became more influential because of reduction in workload. Change in client demands addressed the need for contractors to adopt necessary measures. Failure to do so would lead to loss of market share and difficulties in retaining the business. The transformation of cause of failure from organization to economic between the 1970s and the 1980s can be explained by improvements in skill and techniques for managing businesses as well as the shrinkage of local and overseas market opportunities.
In the 1990s, economic factors dominated as a cause of failure as local market opportunities declined drastically leading to fierce competition. There was a need for contractors to cut the profit margins in order to secure workload. Cash flow problems could easily be generated as a consequence of both lower profit and higher interest costs. Given a series of events that tied up capital further, insolvency of business was likely to occur.

B. Objective 2: To review the successful strategies adopted by contractors in the UK in response to recession.

This objective is also dealt with in the literature review in chapter two. Different successful strategies adopted by contractors in the UK to encounter the recession from the 1970s and the 1990s are reviewed. Specific strategies were formulated to ensure the survival of contractors in the market.

In the 1970s, despite the decline of output in the local market, contractors widely adopted the diversification strategy to capture other cash-hungry businesses. Examples include the use of merger and acquisition by housebuilding firms to build up a land bank as well as the use of merger and acquisition by contracting firms to acquire building supply subsidiaries. Another strategic move included developing overseas market in the Middle East, by some large contractors, in order to counteract the decline in the local construction market. Some firms were cautious in the unpredictable environment and started to use more secure methods such as joint venture in order to expand. These were successful strategies that helped the contractors to survive in the recession during the period between 1973 and 1980. It was concluded that the construction market environment was not yet that intense and
the firms could still pursue expansion strategies as a way to survive since the risks they could afford to undertake were minimal.

In the 1980s, following a change in clients’ attitude and the decline in overseas work, contractors needed to respond to changes by allocating resources in investment to research and development as well as towards marketing activities. Due to the shortfall in the overseas market and unpredictable environment in the local construction market, contractors resorted to cost competition as a means of securing the workload through the increasing use of subcontracting. The environment in the construction market entered into an era of competitiveness and there was a need to achieve efficiency in order to survive in the market.

In the 1990s, with the recession that came into effect between the late 1980s and the 1990s, it resulted in a more intensive environment in the construction market which required massive restructuring of the firms such as the use of cost cutting strategies as well as financial strategies. The contractors called for the need for immediate survival by means of redundancy and disposal of assets. Hardly could the contractors pursue expansion in other businesses as there was a fall in the profits which induced a higher risk to be undertaken. Besides trimming down those non-core businesses as a way to inject more capital for the sake of survival, the contractors were forced to concentrate on core business which was regarded as the most successful survival strategy as a means to prevent further loss through expansion in other markets as well as making better use of the internal resources to improve the performance of the core businesses. The competition in the construction market was regarded as more intense and fiercer than that of the 1980s which could be reflected from numerous large firms competing for smaller projects in order to
In theory, there are other strategies such as improving relationship with clients, subcontractors and the suppliers. They aim at increasing competitiveness by means of improving cash flow and lead to a greater likelihood of securing workload from the clients. With regards to the relationship with clients, the construction industry in the UK did not develop a long term relationship with the clients because competitive bidding to gain market share was emphasized during the period from the 1970s to the 1990s. However, it started to gain acceptance in the 2000s which provided insight on possible means for survival by developing prolonged relationship with the clients. With regards to the relationship with the subcontractors and suppliers, the relationship was considered as adversarial. The benefits of improving the relationship was only limited to lesser risk, conflict and better communication. However, learning from the experience of successful Japanese international contractors, they have evolved the development of long term relationship which benefited the parties with higher productivity and better quality of work as well as securing exclusive services from them. This provided insight on possible measures of enhancing the competitiveness for the sake of survival during recession.

C. Objective 3: To identify and analyze the causes of failure of contractors in Hong Kong during times of recession.

Objective 3 is dealt with in chapter three and four based on data obtained from questionnaire responses and follow-up interviews. It appears that a decline in invitations to tender represents the main cause of failure for the contractors in Hong Kong. Intense competition ranks as the second cause. Such a priority is logical in the
sense that with the fall in the construction output, contractors has to surrender their profit margin in order to win the tender. The consequence is that competition becomes more intense, causing difficulties for contractors to survive in the market. The two combined effects build up the chain of effects accounting for the causes of failure for Hong Kong contractors during recession.

The cause of failure in Hong Kong is similar to that of the UK construction industry during the 1990s. The market environment in the 1990s was characterized by a drastic fall in the construction output which induced intense competition for the contractors. The environmental impacts to the contractors had a far reaching implication to the firms that not only cost competitions prevailed but also the restructuring was emphasized in order to enhance efficiency for survival in the market. For the case in Hong Kong, the contractors also encounter a drastic decline in the output. There is a need to cut the profit margin in order to win the tender which induces intense competition. Besides relying on competitive bidding in order to gain market share, the contractors in Hong Kong also experiences restructuring in order to maintain competitiveness in the marketplace. One minor difference is that the restructuring scale in the UK construction industry during 1990s was considered as massive since most of the construction firms had to trim down their non-core businesses that were expanded through the use of merger and acquisitions in the 1980s. However, the Hong Kong construction industry did not experience rapid expansion before the recession and therefore the scale was relatively smaller than the case in the UK.

Hardly could the causes of failure in the UK construction industry in the 1970s and 1980s be applied to the case in Hong Kong. The cause of failure for UK contractors
in the 1970s was mainly dominated by poor management of firms. It differs from construction firms today in Hong Kong with the use of sophisticated financial control techniques. Also, the market opportunities in the 1970s were plentiful and there was a wide range of markets that contractors could serve. It differs from construction firms in Hong Kong today in that opportunities are nearly fully exploited and there is an urgent need to rely on the market shares in the mainland. The cause of failure for UK contractors in the 1980s can be attributed to intense competition caused by a fall in the local construction output and overseas activities. However, the extent to which the competition was intense was not comparable to that of the 1990s in the UK since the fall in the local construction demand focused on the civil engineering sector instead of all sectors in the construction industry and the contractors could still rely on cost competition to survive in the market without any further measures taken on restructuring of firms. Therefore, the consequence of the environmental impacts in the 1980s was not as serious as that of the 1990s. Besides, quality issues started to be addressed by the clients in the 1980s. It differs from that of Hong Kong construction industry with the popular use of selective tendering which have been evolved for a long period of time. Therefore, failure to meet clients’ demand in the UK during the 1980s could not be applied to the case in the Hong Kong construction industry.

D. Objective 4: To identify and analyze the successful strategies adopted by contractors in Hong Kong in response to recession.

Objective 4 is dealt with in chapter three and chapter four based on data obtained from questionnaire responses and follow-up interviews. Both large sized and small sized firms perceive strategic decisions and cost control decisions as the most
successful strategy to ensure survival. These strategies have gained popularity among the contractors in Hong Kong. It is reasonable as strategic decisions help to build up the competitive edges for contractors necessary to ensure survival during economic downturn environment. Cost decision receives moderate attention from the contractors in Hong Kong as efficiency has long been emphasized in the market. There is a tendency for contractors to adopt leaner structure in order to save the cost and raise more capital for maintaining the operations. Financial decisions received minimal attention as the contractors in Hong Kong are cautious in employing debt in capital structure. The first two characteristics are consistent to those adopted by the UK contractors during the 1990s as the contractors in the UK adopted different strategic decisions and undertook restructuring to ensure survival. The third characteristic of Hong Kong is not similar to that of UK as most of the UK contractors experienced over-expansion in the 1980s and had to rely heavily on the financial decisions such as disposal of assets to ensure their survival.

Among the choices over strategic decisions, both large sized and small sized firms undertook common successful strategies such as concentrating on core business and undertaking smaller project. The first one prevents the contractors to invest the capital in other non-core businesses because contractors are not experienced in managing other businesses and the risk associated is very high especially under a downturn environment without sufficient reserve of capital. The second one allows more cash flow to be generated through seeking these smaller projects and helps the contractors to stand a higher chance to retain the businesses. These two strategies are similar to that of UK adopted by the contractors during the 1990s because the environment was hostile and the market was characterized by intense competition. Uncertainty in other market sectors forced the UK contractors to concentrate on their
core business. Given the decline in the construction output during recession, firms had to seek for smaller projects as well in order to ensure steady workload for the sake of survival.

Apart from these two common core successful strategies, large sized firms undertake diversification into construction related businesses and forming joint venture and small sized firms undertake improving relationship with subcontractors and suppliers. The reasons for undertaking diversification into construction related businesses by the large sized contractors are to further strengthen the core business by providing these subsidiary services which can help to increase the clients’ value. Eventually, a wide variety of services offered by the large sized contractors can attract those clients who would like to purchase one stop service. The reasons for forming joint venture by the large sized contractors are to secure workloads with larger value. It is suitable for large sized contractors to pursue this strategy as they are capable of undertaking large scale projects and higher capacity of handling the higher risk associated with the complex projects. For small sized contractors, since they are prone to the cash flow problems, they can seek more cash flow such as obtaining credits from subcontractors and suppliers by means of maintaining relationship with them. These tactics are found to be important for ensuring survival by the small sized contractors during recession as cash flow is essential for their survival.

The strategy of cost control is considered as essential for survival but not effective enough to develop competitive edge since most of the contractors could maintain their operation at a reasonable low cost. The findings of higher rating in ‘reducing headquarter cost, ‘reducing employment’ and ‘reducing wage growth’ suggest that it
is important for firms, irrespective of their size, to preserve longer run competitiveness and provide a solid foundation for post-recession operations. Short sighted cutting measures such as ‘close establishment’, ‘layoff employees’ is not encouraged as it is perceived to be a sacrifice over long run competitiveness.

The strategy of financial decisions is considered as minimal in building up competitiveness of the firms but still can be regarded as a measure for smoothing the contractors’ operation and tackle imminent problems immediately. None of the strategy is found to be successful in building up competitiveness to ensure the survival of firms.

With respect to investment plans of the contractors, abandonment in plant and machinery, R& D and marketing expenditure prevails. It is not justifiable to adopt ‘investment in plant and machinery’ as there is little likelihood that expansion of firms takes place during recession. ‘Investment in R& D’ is only found to be a successful strategy adopted by technologically and financially sounded civil engineering contractors because they participate in global platform and such a strategy can ensure their competitiveness in the international market. However, it is not a successful strategy for building contractors as there is a low possibility for building contractors to develop another niche market. ‘Investment in marketing expenditure’ is not a successful strategy judging from a low possibility for contractors to enter into foreign markets during recession as well as a wide adoption of traditional procurement as a means for competition without any need of marketing activities such as offering additional services and package deal for the clients. Apart from these findings, ‘investment on training staff’ is found to be commonly adopted by contractors. Its outcome is found to be moderate success as it
can help to prevent high turnover of employees and at the same time can strengthen the long run competitiveness of the firm by having a team of fully committed staff to strive for the firm’s objectives.

5.2 Recommendations

A. Objective 5: To recommend survival strategies for contractors in Hong Kong in response to the recession.

Based on an analysis of preceding chapters- the UK experience and, in particular, Hong Kong contractors’ experiences in the 1998 to 2003 recession, it would appear that, irrespective of the size of the firms, the strategies of ‘concentrating on core business’ and ‘undertaking smaller projects’ should be given strict adherence during recession.

‘Concentrating on core business’ is associated with how wise the capital is spent by the firm. Given limited experience of contractors in managing other sectors and the shrinkage of capital arisen from low profitability and a decline in workloads during recession, the risk to carry out other decisions such as ‘develop overseas market’ and ‘merging and acquisition’ of other businesses are beyond the firms’ abilities to undertake. Instead, concentrating all the firm’s resources in one core business can increase the likelihood of improving performance of the business and therefore this strategy should be given merit in the first place.

‘Undertaking smaller projects’ can improve cash flow of a firm and ensure steady workload during recession. Despite the decline in workload for building and civil engineering sectors, repair and maintenance sector has experienced a boost in terms
of gross value of construction work, suggesting a migration into this sector is justifiable. With the implementation of the building inspection schemes launched by Buildings Department and redevelopment projects launched by Hong Kong Housing Society and the Urban Renewal Authority as well as higher requirements for quality for life, it is foreseen that repair and maintenance sector will occupy a large portion of the gross value of construction work and will provide opportunities to the industry in the coming years. Therefore, the contractors should be well-prepared for the transformation and develop competencies to grasp the opportunities in this sector.

‘Diversification into construction related businesses’ and ‘Forming joint venture’ are designated for large sized contractors as successful strategies adopted for survival during recession. The availability of capital and higher capacity in terms of resources and technology allow them to undertake these strategies. ‘Diversification into construction related businesses’ aims at developing subsidiary businesses to strengthen the core business for the purpose of enhancing client’s value. It would be useful for those large sized contractors who aim at building up competitive edge over the tender of projects using quality led construction procurement approach which is widely adopted in government projects and civil engineering projects nowadays. In this quality led approach to contractor selection, both quality and price should be given due consideration in the tender evaluation system including technical knowledge and package of services as one of the attributes and the winning tender may not be the lowest bid but the one with the highest composite score. With the increasing attention of clients over the value for money in the delivery of the projects nowadays and rapid changing expectation of clients, the large sized contractors should be prepared to offer an increasing variety of services
so as to keep abreast of the times. ‘Forming joint venture’ aims at securing large value workload with the creation of complimentary strengths among the joint venture participants. It would be useful for those large sized contractors who are capable of handling large scale projects, especially those with expertise in civil engineering construction to join hand with another potential contractor that can maximize the synergy effects for the purpose of gaining these high value joint venture contracts. With the announcement of Ten Major Infrastructure Projects by Chief Executive Donald Tsang in his Policy Address of 2007, it is foreseen that there are a lot of opportunities to make use of this strategy to secure more large value projects which ensures steady workload for survival during the coming recession.

‘Improving relationship with subcontractors’ and ‘Improving relationship with suppliers’ are designated for small sized contractors as successful strategies adopted for survival during recession. Due to insufficient capital and smaller capacity, they are unable to carry out similar strategies such as ‘Diversification into construction related businesses’ and ‘Forming joint venture’ as those of the large sized contractors. As the impact of recession leads to a more severe consequence over cash flow problem to these small sized contractors, resorting to ‘improving relationship with subcontractors’ and ‘improving relationship with suppliers’ allow them to improve the cash flow of the business by obtaining credits from these parties and therefore these strategies should be highlighted with importance to small sized firms.

Irrespective of the size of the firms, if the impact of recession on the firms is so severe that retrenching of firm is necessary, it is recommended that priority should be given to ‘reducing headquarter cost, ‘reducing employment’ and ‘reducing wage growth’ in order to preserve long run competitive of the firms. Short sighted cutting
such as ‘close establishment’ and ‘layoff employees’ should be the last resort.

For the investment policies of both large and small sized firms, it is recommended that investment on training on staff should not be cut as it can help to build up a loyal workforce that can help to realize the company’s objectives. For large sized firms playing in the field of international civil engineering construction, investment in R&D should be proceeded in order to maintain the competitiveness in the international level.

5.3 Limitation of Study

The major limitation of this study is the overall response rate to the questionnaire which is only about 18.4%. The data obtained may not be representative enough. Especially the response rate of Group A and B contractors, only 5.6% response rate is received. This may not truly reflect the situation for small sized contractors.

Another limitation is that interviews cannot be arranged with small sized contractors. In-depth discussion over the issues of how ‘improving relationship with subcontractors’ and ‘improving relationship with suppliers’ cannot be carried out. The consequence is that the real practice for these contractors is not known. Since the partnering culture of these firms is not certain i.e. whether relationship takes a short term or long term horizon, implication over the benefits of these strategies may be subject to changes.

5.4 Further Study

It is suggested that more specific topics such as the relationship between the use of collaboration and the environment can be investigated in order to strengthen the result of this study.
APPENDICES
Appendix 1
Covering Letter

THE UNIVERSITY OF HONG KONG
Department of Real Estate and Construction

25th January, 2008

Dear [to address target participants],

RE: Questionnaire Survey- Adaptation Strategies of Contractors in response to Recession

I am To Wan Pun of Department of Real Estate and Construction at the University of Hong Kong. I will conduct a research project on ‘Adaptation Strategies of Contractors in response to Recession’ and would like to invite [to address target participant] to participate. The purpose of the study is to investigate what survival strategies had been adopted by contractors during recession so that successful strategies can be best introduced to contractors to ensure their survival.

This questionnaire is relatively short and will take you around 5 minutes to complete. It would be grateful if you can help me to complete it. Please complete the reply slip below to indicate whether you do decide to participate in this research. All data collected will be used solely for academic purpose and the identity of individuals will not be revealed without their consent and all data collected will be destroyed immediately after the examination of dissertation. Participation is entirely voluntary. This means that you can choose to stop at any time without negative consequences. If you have any questions about the research, please feel free to contact To Wan Pun on 97543975. If you want to know more about the rights as a research participant, please contact the Human Research Ethics Committee for Non-Clinical Faculties, the University of Hong Kong (2241-5267).

If you understand the contents described above and agree to participate in this research, please sign below. Your help is very much appreciated. Please return the finished questionnaire and the reply slip with the attached envelope (Stamp is not required) as soon as possible. May I thank in advance for your kind assistant. I am looking forward to receiving your reply in the near future.

Yours sincerely,

To Wan Pun
Department of
Real Estate and Construction
The University of Hong Kong
Appendix 2
Questionnaire Sample

Section One: Basic Information
Q1. Which group does your company belong to under the government registered contractor list?
☐ Group A ☐ Group B ☐ Group C

Q2. What building sectors does your company specialize in?
☐ Building ☐ Civil Engineering ☐ Other: Please specify ____________________

Q3. How long has your company been in the construction industry?
☐ Below 10 years ☐ Between 10-20 years ☐ 21-30 years

Q4. How severely did the previous recession between 1998 and 2003 affect your company?
☐ Extremely severely ☐ Severly ☐ Moderately ☐ Not at all

Q5. Was there any decline in the total value of construction works in Hong Kong undertaken by your company between 1998 and 2003 when compared to economic boom preceding 1997?
☐ Yes, with significant decline ☐ Yes, with moderate decline ☐ Yes, with minimum decline ☐ No

Q6. Did your company introduce more debt financing to combat the recession between 1998 and 2003?
☐ Yes, with significant level ☐ Yes, with moderate level ☐ Yes, with minimum level ☐ No

Q7. Did your company undertake construction activities in Macau during the period between 1998 and 2003?
☐ Yes ☐ No

Q8. If so, what is the approximate range of turnover percentage for the Macau market during the period between 1998 and 2003?
_____~_____%
Q9. Did your company participate in other overseas market (except Macau) during the period between 1998 and 2003?

□ Yes □ No

Q10. If so, what is the approximate range of turnover percentage for the overseas market activities during the period between 1998 and 2003??

_____~_____%

Section Two: Causes of Failure

Q11. What is the impact of the recession between 1998 and 2003 on the following aspects of your company’s trading position? (Please put a tick in the appropriate box)

<table>
<thead>
<tr>
<th></th>
<th>Seriously</th>
<th>Mild</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decline in domestics sales</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decline in overseas sales</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excess labour resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excess inventories (i.e. materials, plant etc)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Excess indebtedness (e.g. principle and interest payment)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cashflow problems</td>
<td></td>
<td></td>
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</tbody>
</table>

Q12. Which of the following factors have contributed to your company’s problems during the recession between 1998 and 2003? (Please choose the appropriate number representing your view on a scale from 1 to 5)

<table>
<thead>
<tr>
<th></th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;- Low</td>
</tr>
<tr>
<td>A. Macroeconomic conditions of the construction industry</td>
<td>1</td>
</tr>
<tr>
<td>High interest rate</td>
<td>1</td>
</tr>
<tr>
<td>Decline in the number of invitations to tender</td>
<td>1</td>
</tr>
<tr>
<td>Worldwide recession</td>
<td>1</td>
</tr>
<tr>
<td>International competition</td>
<td>1</td>
</tr>
</tbody>
</table>
### B. Decision Within the firm
- Poor financial control
- Lack of management maturity
- Expansion of company through mergers and acquisition before 1998
- Over expansion of range of products and services provided before 1998

### C. Actions of other firms
- Increased competition
- Credit limits imposed from bank
- Creditors defaulting in payment
- Innovations introduced by competitors (e.g. advanced construction technology etc.)

### Section Three: Strategies

Q13. Please categorize the following possible courses of action and indicate how successful have they been in overcoming these problems? (Please put a tick in the appropriate box)

<table>
<thead>
<tr>
<th>Action taken and very successful</th>
<th>Action taken and of moderate success</th>
<th>Action taken and of minimum success</th>
<th>Action taken but not successful</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Financial Decisions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disposal of assets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce dividend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reschedule debt</td>
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</tr>
<tr>
<td>Increase short-term borrowing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B. Strategic Decisions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concentrating on core business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developing overseas market</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merge/ acquire another company</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversification into other construction related businesses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change marketing strategies</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>-----------------------------</td>
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<td>---</td>
<td></td>
</tr>
<tr>
<td>Forming joint venture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduce Innovations (i.e. process, product innovations etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undertaking smaller projects</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Improving relationship with clients (e.g. securing more workload during recession, advanced payment from client etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improving relationship with subcontractors (e.g. obtaining lower bid, better project performance etc.)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Improving relationship with suppliers (e.g. obtaining favorable credit conditions)</td>
<td></td>
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<tr>
<td><strong>C. Cost Control</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close Establishment (e.g. regional offices)</td>
<td></td>
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<td></td>
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<tr>
<td>Reduce Headquarters’ Cost</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Layoff employees</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Reducing wage growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reducing employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increasing in the use of subcontracting</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q14. Please categorize the following changes in investment plans during recession between 1998 and 2003. (Please put a tick in the appropriate box)

<table>
<thead>
<tr>
<th></th>
<th>Abandoned</th>
<th>Postponed</th>
<th>Brought Forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment in plant/ machinery</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Investment in R&amp; D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment in Advertising/ marketing expenditure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training staff</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
Q15. Referring to question 14 above, if any measure was brought forward, please indicate how successful it has been in improving the competitiveness of the company to combat the previous recession between 1998 and 2003. (Please put a tick in the appropriate box)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Brought forward and very successful</th>
<th>Brought forward and of moderate success</th>
<th>Brought forward and of minimum success</th>
<th>Brought forward and not successful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment in plant/ machinery</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Investment in R&amp; D</td>
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<tr>
<td>Investment in Advertising/ marketing expenditure</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Training staff</td>
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</tbody>
</table>

**Section Four: Follow-up Interview**

Q16. Are you interested in participating in an interview with respect to the topic of ‘Adaptation Survival of Contractors in response to Recession?’

□ Yes □ No

Q17. If so, please kindly leave your email so that further arrangement of the interview can be made subject to your convenience.

Email: __________________________
REFERENCES
REFERENCES


Lau, H. M. D. (2005) Special relationships in the Hong Kong construction industry, the University of Hong Kong, Hong Kong.


