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Contractors' Business Development for Overseas Markets

By

CHEONG, Chit Sun (Jackson)

Doctoral Thesis
Submitted in partial fulfilment of the requirements
for the award of
Degree of Doctor of Philosophy of Loughborough University

Nov. 1, 2010

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Abstract

The survival and sustainable development of construction contractors depends on their own capacity as well as their ability to cope with the ever changing environment.

Hong Kong was once a large construction market by the world standards; but in the period 1998 to 2007 has suffered from long term market shrinkage. This shrinkage in the work load available in the market has demanded that Hong Kong contractors change their business strategy and consider expanding their construction business to the international marketplace. From surveys and studies of Hong Kong contractors, it is noted that traditionally the majority of contractors' organizations were not active in participating in the international construction markets. The prime reasons were that the Hong Kong domestic market was large enough to sustain the contractors and that Hong Kong construction professionals are reluctant to work overseas. However due to the continuous shrinkage of the market, Hong Kong contractors were being forced to consider expanding their construction business to the overseas markets in order to survive.

This thesis reviews existing theories and previous studies in overseas construction business development. It analyzes surveys of Hong Kong construction contractors and conducts a scientific study of a Hong Kong based contractor organization which expanded its construction business to overseas markets. This study was conducted through an integrated action research methodology. Based on the problems, impacts, difficulties and success this organization faced during its practical experience in the overseas business expansion, this thesis explores and recommends a structured approach for Hong Kong contractors to re-define and develop their business overseas. The focus of study is the pre-contract award stage of business development. It focuses on the entry modes, strategic planning, risk management and tender management of the organization. The author also presents various models for use in attaining width and depth of understanding of overseas knowledge. These include preliminary entry selection model, dynamic

management, and a spiral model (a learning & knowledge based business development model), for use in the management of international construction business development at the pre-contract stage.

The groundwork laid down in this thesis will form the basis for further studies and the development of theories / models. It is the expectation of the author that other contractors in Hong Kong and other nation's contractors may make use of this research as assistance to their overseas business development. The ultimate aim of the author has been to change the goal of contractors from being companies able to compete with international contractors in their domestic market to contractors that are able to compete in the international market place.

Key words: construction, contractor, market entry, risk management, overseas business development, spiral model, action research, dynamic management

Dedication

To Prof. Andrew Baldwin who has encouraged me and led me through tough times of this PhD project

To those who gave their assistance and support

Alan Duxbury, Ashley Howlett, Connie Leung, Eva Leung, Raymond Ho, Prof. Mohan Kumaraswamy, Prof. J.M. Ko, Sammy Zhou, T.S. Chu, May Lei, M.H. Cheang, Ana Cheong

To those who gave their unconditional love and support

Amy Chan, Julia Cheong, Sara Cheong,

Contents

	Certificate of Originality	i
	Abstract	ii
	Dedication	iv
	Contents	v
1	Introduction	1
1.1	Research Questions	4
1.2	Aim of Research	5
1.3	Objectives of Research	6
1.4	Research Design and Methodologies	6
1.5	Research Flow Chart	9
1.6	A Summary of the Research Findings and the Contribution to Knowledge	10
1.7	An overview of the thesis	13
2	Literature Review	14
2.1	Introduction	14
2.2	Construction: a Theoretical Perspective	15
2.2.1	Extent of Research of Construction Services	15
2.2.2	Characteristics of Construction Services	20
2.3	International Construction Business Development : a theoretical review	32
2.3.1	International Construction Market Review	32
2.3.2	Globalization of the Construction Industry	36
2.3.2.1	Globalization	36
2.3.2.2		39
	Globalization of the Construction Industry	
2.3.2.3	Dimensions of Globalization for the Construction Industry	41
2.3.2.3.1	Social Dimension	42
2.3.2.3.2	Construction Related Dimensions	44
2.4	Competitiveness and Associated Business Development Theories	50
2.4.1	International Business Development: Strategy	53
2.4.2	International Business Development: Culture of	61

	Collaboration	
2.4.3	International Business Development: Risk Management	65
2.4.4	International Construction Industry Business Development Review	68
2.5	Review and Comparison of other Overseas Construction Business Development Models	72
2.5.1	A German contractor expanding its' international construction business	73
2.5.2	Review of Contractors from Developed Countries in their Overseas Construction Business Development	76
2.5.2.1	Germany	76
2.5.2.2	Hong Kong	78
2.5.2.3	Singapore	80
2.5.2.4	China	81
2.5.2.5	UK	83
2.5.2.6	USA	84
2.6	Summary	86
3	Research Design and Methodology	92
3.1	Introduction	92
3.2	Research Approach	93
3.2.1	Philosophy Consideration	94
3.2.1.1	Ontology	96
3.2.1.2	Epistemology	97
3.2.1.3	Methodology	101
3.2.2	Selection of Research Approach	111
3.2.3	Pluralism and Research Methods	116
3.2.3.1	Experimental Research Methods	117
3.2.3.2	Opinion Based Research Methods	118
3.2.3.3	Observational Research Methods	119
3.2.4	Research Strategy	121
3.2.4.1	Action Research	124
3.2.4.2	Case Study	131
3.2.4.3	Survey	135
3.2.4.4	Integrated Research Approach – Action Research & Case Study	138

3.3	Research Methods Application – Survey	147
3.3.1	Surveys	148
3.3.2	Hypothesis and Bases of Surveys	150
3.3.3	Pilot Survey executed in 2004	151
3.3.4	Follow-Up Survey carried out in 2008	153
3.3.5	Survey Data Collection	155
3.3.6	Survey Outcome Analysis	157
3.3.7	Survey Outcome Constraints	158
3.4	Research Methods Application - Case Study of a Hong Kong Based Contractor	160
3.4.1	Integrated Research Approach – Action Planning	160
3.4.2	First-person Complete Participation Research Method	161
3.4.3	Active Participation Research Method	162
3.4.4	Case Study Method	164
3.4.5	Case Study Data Collection	165
3.4.6	Case Study Outcome Constraints	166
3.5	Conclusion of Research Design and Methodology	167
4	Data Collection and Analysis	169
4.1	Introduction	169
4.2	Case Study 1 – Study of a Hong Kong Based International Contractor	170
4.2.1	Background	170
4.2.2	The History & Organizational Structure of the Company	172
4.2.3	Cross-regional development in Macau & Mainland China	177
4.2.4	Pilot Exploration of Overseas Business Development in 2001 – 2002	179
4.2.5	Decision in Overseas Business Development in 2003	181
4.2.6	Choice of Target Market(s)	182
4.2.6.1	Ease of Market Entry	185
4.2.6.2	Language	185
4.2.6.3	Culture	186
4.2.6.4	Legal system	186
4.2.6.5	Accessibility	186

4.2.6.6	IT & Communication Systems	186
4.2.6.7	Transportation	187
4.2.6.8	Security	187
4.2.6.9	Market Size and Market potential	187
4.2.7	SWOT Analysis of the Company	189
4.2.7.1	India	189
4.2.7.2	Dubai	193
4.2.8	Tendering Experience during Overseas Business Development	196
4.2.9	Discussion of Specific Problems Encountered	200
4.2.10	Conclusion	204
4.3	Pilot Survey in 2004 – A Study of Hong Kong Based Contractors in their Business Development Strategy	208
4.3.1	Introduction	208
4.3.2	Survey Considerations	210
4.3.3	Survey by means of Interviewing Hong Kong Based Contractors	210
4.3.4	General Surveyed Companies' Information	210
4.3.5	Overseas Business Development	212
4.3.6	Risk Management Survey	213
4.3.7	Tender Management	214
4.3.8	Government Aid to Construction Operations outside Hong Kong	214
4.3.9	Discussions	215
4.3.10	Hong Kong Engineers Working Overseas	217
4.3.11	Conclusion	218
4.4	A Follow-up Study of Hong Kong Contractors Expanding to Overseas Construction Markets – 2008	219
4.4.1	Introduction	219
4.4.2	Survey of Hong Kong Based Construction Contractors in 2008	220
4.3.3	Market Entry Survey	224
4.4.4	Risk Management Survey	229
4.4.5	Expectation of the Hong Kong Construction Industry	233

4.4.6	Conclusion	235
4.5	Follow-up Case Study – Hong Kong Based International Contractors' Regional Business Development and Tender Management in 2008	237
4.5.1	Introduction	237
4.5.2	2008 Construction Market Review	237
4.5.3	Results for a Hong Kong Based International Contractor	240
4.5.4	Hong Kong Contractors Entry to Overseas Construction Markets	242
4.5.5	China State Regional Development and Tender Management Review for 2008	248
4.5.5.1	India	248
4.5.5.2	UAE	250
4.5.5.3	Tender Management Review	252
4.5.6	The Impact of the Global Financial Crisis, 2008	255
4.5.7	Conclusion	257
5	International Business Development Model in the Construction Industry for Contractors	260
5.1	Introduction	260
5.2	A Conceptual Learning and Knowledge Based Business Development Model: 'The Spiral Model'	261
5.3	The Entry Mode of the Construction Business	265
5.3.1	Preliminary Entry Selection	267
5.3.1.1	Language Barrier	268
5.3.1.2	Connection with Home Nation (head office)	269
5.3.1.3	Future Sustainable Development	270
5.3.1.4	Foreign Entry Consideration	270
5.3.1.5	Safety	271
5.3.2	International Construction Market Selection	272
5.4	Contractor Capacity in International Market	278
5.5	Strategic Planning for Market Entry	281
5.5.1	Mission & Objectives	283
5.5.2	Environmental Scanning	284
5.5.2.1	Preliminary External Environment Factors	286
5.5.2.2	Study of External Environment	287
5.5.3	Strategy Formulation	293

5.5.4	Strategy Implementation	296
5.5.5	Strategic Control	298
5.6	Tender Management	300
5.7	Risk Management	305
5.8	Dynamic Management – an Integration of entry mode, strategic planning, tendering and risk management	313
5.9	Validity	316
5.10	Summary	321
6	Conclusions and Recommendations for Further Research	323
6.1	Introduction	323
6.2	Aim and Objectives of the Research	324
6.3	Findings	326
6.3.1	Mixed Action Research	326
6.3.2	Developed Theories and Models	328
6.4	Conclusions	334
6.5	Recommendation for Contractors and Researchers	337
6.6	Recommendations for Future Work	338
 Appendix		
A	Market Comparison of the Selected Markets – India, Dubai & Hong Kong	342
B	Profit Marking Comparison between India's Fastest Growing Construction Companies	343
C	Responsibilities of Key stakeholders in Tender Management procedures	344
D	The Research Onion	348
E	A Taxonomy of Field Role	349
F	Questionnaire for Risk & Tender Management for Overseas Business Development - 2004	350
G	Interview Record of Survey in 2004	355
H	Questionnaire for Overseas Business Development	356
I	2008 Follow-up Survey Interview Record	364
J	Components of Data Analysis Interactive model	365

K	Data of Hong Kong Construction Market and GDP	366
L	Independent CSCIH Staff Satisfactory Survey	367
M	Porter's Five Forces of Competitive Position	368
References		369

List of Figures

Fig. No.	Description	Page
Fig. 1.1	HK Construction Market Volume 1983 - 2009	2
Fig. 3.1	Integrated Research Approach Design Diagram for Case Study & Action Research	14514 5
Fig. 4.1	Organization Chart of China Overseas Group in 2009	176
Fig. 4.2	HIA Redesign & Rearrange usable Area	202
Fig. 4.3	HIA Redesign for Saving of Excavation	202
Fig. 4.4	China State Overseas Business Development	207
Fig. 4.5	China State Overseas Business Development Characteristics	207
Fig. 4.6	Hong Kong Construction Volume 1993-2003	208
Fig. 4.7	Top 15 Nations Construction Spending in 2003	208
Fig. 4.8	Size of Surveyed Companies	210
Fig. 4.9	Contractors Origin	211
Fig. 4.10	Size of Surveyed Hong Kong Contractors	220
Fig. 4.11	Characteristics of Hong Kong Construction Market	244
Fig. 4.12	Hyderabad International Airport, India	248
Fig. 4.13	MP1 Highway, India	248
Fig. 4.14	UAE Construction Market Change	250
Fig. 5.1	Spiral Model : a Learning & Knowledge based Business Development Model	263
Fig. 5.2	Risk Potential Chart (Global Insight)	271
Fig. 5.3	Conceptual Model of Contingencies	274
Fig. 5.4	Interaction of the 4 Primary Factors Affecting Entry Mode	275
Fig. 5.5	Key Interaction Factors That Affects Entry Mode	277
Fig. 5.6	Company Capacity in Handling External Influence & Impact	280
Fig. 5.7	Simplified View of the Strategic Planning Process	281
Fig. 5.8	Environmental Scanning Process	284
Fig. 5.9	Model of Preliminary External Environment Factors Affecting Companies Expanding Their Business to International Markets	286
Fig. 5.10	Model of Analyzing Environment & Core Capacity of Organization & formulate Strategy	294

Fig. No.	Description	Page
Fig. 5.11	Aims of Overseas Construction Business Development	302
Fig. 5.12	Project Management (Tender) Team Work Model	304
Fig. 5.13	Risk Management Cycle	306
Fig. 5.14	Business Risks	309
Fig. 5.15	The Risk Balance	312
Fig. 5.16	Risk Management Flow Chart	312
Fig. 5.17	Dynamic Management due to Change of Environment or Learning	316

List of Tables

Table No.	Description	Page
Table 2.1	Standard International Classification Of Construction Services	17
Table 2.2	HK Construction Volume And Exports Of Construction Services	21
Table 2.3	Construction Sector Contribution To GDP And Employment For Selected OECD Nations For Year 2005	22
Table 2.4	Construction Sector's Percentage Contribution To GDP	23
Table 2.5	International Volume Ratio Of Top 10 International Contractors 2009	33
Table 2.6	International Volume Ratio Of Largest Chinese Contractors 2009	34
Table 2.7	Hong Kong Contractors International Construction Volume	34
Table 2.8	Uncertainty Matrix	66
Table 2.9	Qualitative And Quantitative Risk Analysis Compared	67
Table 2.10	No. of Firms of Major Countries	86
Table 2.11	Global Market Share of Contractors from Major Countries	86
Table 3.1	Characteristics Of Quantitative And Qualitative Research	106
Table 3.2	Criteria to Judge Quality of quantitative & Qualitative Work	105
Table 3.3	Hierarchical Taxonomy for the Research Based on the 'Soft' vs. 'Hard' Research Dichotomies of Fitzgerald & Howcroft	123
Table 3.4	Action Research Summary Table (Bell et al., 2004)	129
Table 3.5	Relationship between Action Research Methods	130
Table 3.6	Summary of Integrated Research Approach – Action Planning	161
Table 3.7	Summary of Research Design & Methodology	167
Table 4.1	Ranking of CSCEC in the World Top 225 International Contractors	173
Table 4.2	Ranking of CSCEC in the World Top 225 Global Contractors	173

Table No.	Description	Page
Table 4.3	Financial Data of CSCIH for 2005-2009	175
Table 4.4	Strategic Decision of China State for India & Dubai	189
Table 4.5	Hyderabad Airport Passenger Terminal Building Area Comparison	201
Table 4.6	Headcount in Dubai & India	206
Table 4.7	Total Revenue of Dubai & India Operations	206
Table 4.8	Market Considerations	212
Table 4.9	Unemployment Rate of HK & Other Major Economies	216
Table 4.10	Changes in Contractors' Overseas Focus from 2004 to 2008	222
Table 4.11	Change in HK Contractors' Turnover in Cross Regional Business	223
Table 4.12	Comparison of Market Considerations 2004 & 2008	226
Table 4.13	Market Difficulties Considerations	226
Table 4.14	Core Capacity Considerations	227
Table 4.15	Considerations of Staff Working Overseas	228
Table 4.16	'Guanxi' Considerations	228
Table 4.17	Risk considerations	232
Table 4.18	HK Contractors' Considerations of Market Situation	234
Table 4.19	Assistance Considerations of HK Authorities	235
Table 4.20	Result of China State in Year 2006 to 2008	240
Table 4.21	Overall Satisfaction Score for Areas of Investigation by Local	247
Table 5.1	Main Concerns of HK Contractors in Development Overseas Business	289
Table 5.2	Prime Factors Affecting Micro-Environmental Scanning	292
Table 5.3	Risks Description	310

1. Introduction

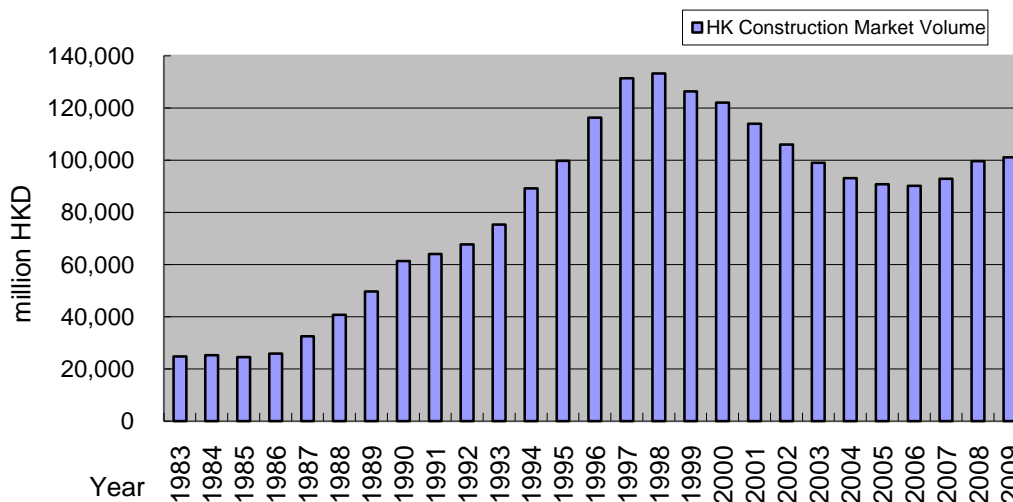
Over the past 150 years, Hong Kong has experienced considerable changes. It has developed from a small fishing village to a world-class financial, trading and business centre due to its specific geographical and political environment. Owing to the limits of available land, much of the land currently developed has been reclaimed. Due to the dense population of people in Hong Kong and the geographical constraints the population dwells in high-rise buildings on both sides of the harbour and satellite cities on the limited available land. Owing to the development needs of Hong Kong, reclamation, site formation works, flyovers, tunnels, water works, bridges and cross harbour tunnels are constructed together with buildings to release the pressure on the ever increasing traffic and habitation areas. Hence the Hong Kong construction industry is a major pillar of the economy of Hong Kong (Cheung, 2006).

Hong Kong was listed in 2003 as the 15th largest construction market in the world (Tulacz, 2003). Yet from 2004, Hong Kong no longer appeared in the top 15, mainly because of the shrinking of its construction market. Further, a review to the top 225 international contractors of the Engineering News-Record (ENR) in 2003 shows that there is only one Hong Kong construction company included in the list (ENR, 2003). Between 2004 and 2009, no Hong Kong construction company was included in the list (ENR, 2004, 2005, 2006, 2007, 2008 & 2009). This reflects the fact that Hong Kong construction companies are neither large in scale nor active in participating in international construction markets.

The total construction market value (HK Statistics, 2009) has increased from 24.7 billion HKD in 1983 to a peak of 133.3 billion HKD in 1998 (refer to Fig. 1.1). Seriously affected by the Asian financial crisis in late 1997, the Hong Kong construction market suffered from the economic downturn. The total construction market value gradually decreased to 90.23 billion HKD in 2006. This indicates that the impact of the market downturn on Hong Kong's construction industry was very serious. The Hong Kong construction market has however shown clear signs of growth as from 2007 following the announce-

ment of the 10 mega-projects by the Hong Kong Chief executive in 2007.

Fig. 1.1 HK Construction Market Volume 1983 -2009



This construction activity represents a significant proportion of the economy of Hong Kong. The local construction sector accounts for 4 % to 5% of Hong Kong's GDP. There are about 800 construction companies engaged as main contractors and they are listed in the Works Bureau's list of approved contractors. The sector employs over 140,000 workers and the employment level for the broader sector, inclusive of architects, surveyors, structural engineers, building services engineers and civil engineers, is around 240,000.

The Hong Kong construction market is characterized by a fair and open procurement system. As the largest client of the local construction market, the Hong Kong Government, signed the Agreement of Government Procurement (Treasury Branch, 2006) and a large number of local developers do the same. The local construction market has a small number of large local contractors together with the presence of many international contractors. Both local and international contractors are able to tender for any public sector projects; and most private sector projects as long as they have good track records, strong financial capability and technical/management abilities. The current industry trend is to award large and complex contracts in single packages to multidisciplinary contractors; so large contractors account for the majority of gross

construction value. This highlights the trend that medium to small size contractors (which represent most of the local contractors) are finding it increasingly difficult to survive as viable business organizations. Based on critical financial analysis of Chan, Tam & Cheung (2005), Hong Kong contractors have struggled to survive after the market's peak in 1998. Here survival depends on either struggling for a position in the local construction market or on exploring their place in overseas/cross-regional construction markets.

As Hodge (2000) suggested, the typical long-term goals of any company are survival and success. As from 2004, there appears to be a trend for local Hong Kong contractors to explore opportunities in overseas construction markets as a result of the difficult down-turn in the local market situation. Local contractors appear to have a general and growing understanding that their engagement in international activities might render them less vulnerable to competitive attacks. This is consistent with the suggestion by Arnold (2004) that the business benefits and opportunities of globalization can be significant in terms of size and the greater ability to learn, innovate and develop. By developing and operating overseas ventures, contractors might be able to offset seasonal and/or cyclical fluctuations in their domestic market and demonstrate an ability to diversify their market portfolios, products or services as well as improve their competitive position. Such overseas expansion will enable the company to achieve a better chance of survival with the possible added value of growth.

For a Hong Kong construction enterprise to develop business activities overseas, the study of international business environments, including political, economic, legal and technological, becomes of prime importance. This study must then be followed by the development of a suitable strategic plan, including mode of entry, alliance selection and subsequent collaboration management in the targeted country is critical to the enterprise's development and future organization.

Other prime factors for decision makers of the construction organization to bear in mind, no matter for survival or development, are organizational governance, and risk. The construction industry is subject to more risk and

uncertainty than many other industries. Flanagan & Norman (1993) concluded that risk and reward always go hand in hand. However, the understanding of risk has changed and developed over time (Olsson, 2002). Even though there are numerous texts dealing with risk identification and management, the skill in management of risk in developing international business has always been open to further improvement.

Studies indicate that the development of the Asian construction industry is inclining towards polarization due to the financial and technical superiority of developed countries. Developing countries including China will experience a long haul to catch-up, owing to the shortfall in its technical, financial and management know-how (Rafferty et al., 1998). Yet further studies of British and Chinese contractors tends to encourage the synergy between them; and such a trend shows that Chinese contractors' market share is drawing the attention of the developed countries (Pheng, Jiang & Leong, 2004). The Singapore construction industry also aspires to become a world-ranking industry; but local contractors lack enthusiasm and expect the Government to lead and support their efforts (Dulaimi & Tan, 2001). It is argued that Hong Kong local contractors, with the advantage of working long-term in a local-international competitive environment, should also target world-class status for the Hong Kong construction industry.

Against this background the research described in this thesis sought to review and recommend a route forward for Hong Kong contractors to develop their business overseas and to develop a model for entry for Hong Kong contractors into new markets to develop new approaches to strategic planning, decision making processes including collaborative and risk management practices and to explore appropriate models for international business development at the pre-contract stage.

1.1 Research Questions

The Hong Kong construction industry has reached a point that continuous development, in the local construction market is becoming very limited. Hong Kong contractors are, therefore, forced to find new

business opportunities as a way to survive. Amongst the opportunities available are the opportunities of working overseas in markets currently experiencing or expecting continuous growth.

It is commonly recognized that Hong Kong construction professionals are well trained to cope with overseas construction management needs. It is, therefore, necessary to identify contractors to consider a working structure that is suitable for the management of the Hong Kong contractors when they want to expand their construction business overseas.

The primary research question is therefore how should Hong Kong contractors expand their construction business to overseas market(s) and minimize their uncertainties and/or risks during their expansion process.

This question includes the following sub-questions:

- Why do Hong Kong contractors want to expand their business overseas?
- How do Hong Kong contractors select their overseas construction market(s)?
- How will Hong Kong contractors retain competitiveness in a foreign environment?
- How will Hong Kong contractors gain their required knowledge through a large number of unknown elements and set up their overseas operations?
- How should Hong Kong contractors avoid risk when working in a foreign environment?

1.2 Aim of Research

Hong Kong contractors need to consider expanding their business to the international construction market for survival and continuous growth. In order to achieve that, Hong Kong contractors have to become “real” international contractors to compete in overseas construction market ra-

ther than becoming large local contractors that can compete with international contractors in the Hong Kong construction market. The aim of the research is to establish a structured approach to assist Hong Kong contractors, or any contractors, to re-define their continuous development from the perspective of expanding their business to the overseas markets.

1.3 Objectives of Research

To achieve this aim the following objectives have been identified:-

- 1.2.1 To study the latest developments of the Hong Kong construction market and its impact on Hong Kong contractors;
- 1.2.2 To identify the current thinking of Hong Kong contractors with respect to expanding their construction activities overseas;
- 1.2.3 To review previous models of international business development and to identify the key elements that need to be considered for the successful development of overseas business;
- 1.2.4 To critically assess the overseas expansion experience of a large Hong Kong based Contractor Organization; and
- 1.2.5 To produce a model for Hong Kong Construction Organizations seeking to expand their business overseas.

It is noted that risk elements referred to in the research questions are embedded in the above mentioned objectives.

1.4 Research Design and Methodologies

Research is a systematic and well organized study or investigation relating to the research questions that have been posed. It comprises the gathering of data/information, the uncovering or finding out the facts or

insights, and the deduction of conclusions through the analysis of the outcomes resulting in the accumulation of knowledge/experience whilst resulting in solving of research problem(s). Hence the research philosophy, research strategy, research design and approaches are crucial to achieve success in relation to research questions, research aims and objectives. The overview of the research design for this thesis includes the introduction, literature review, research design, case study, surveys, results and discussions, and conclusion. Various theories and perspectives are examined through the literature review which includes previous research works relating to the research problem, a review of research methodologies and an understanding of the validity of the theories studied in the literature review.

This thesis studies the phenomenon of business development of the construction industry in the pre-contract stage. Hence the research adheres to a research philosophy based on realism and adopts a pluralistic research approach. The practical research design in this for this methodology is founded on an extensive literature review, surveys and a detailed case study.

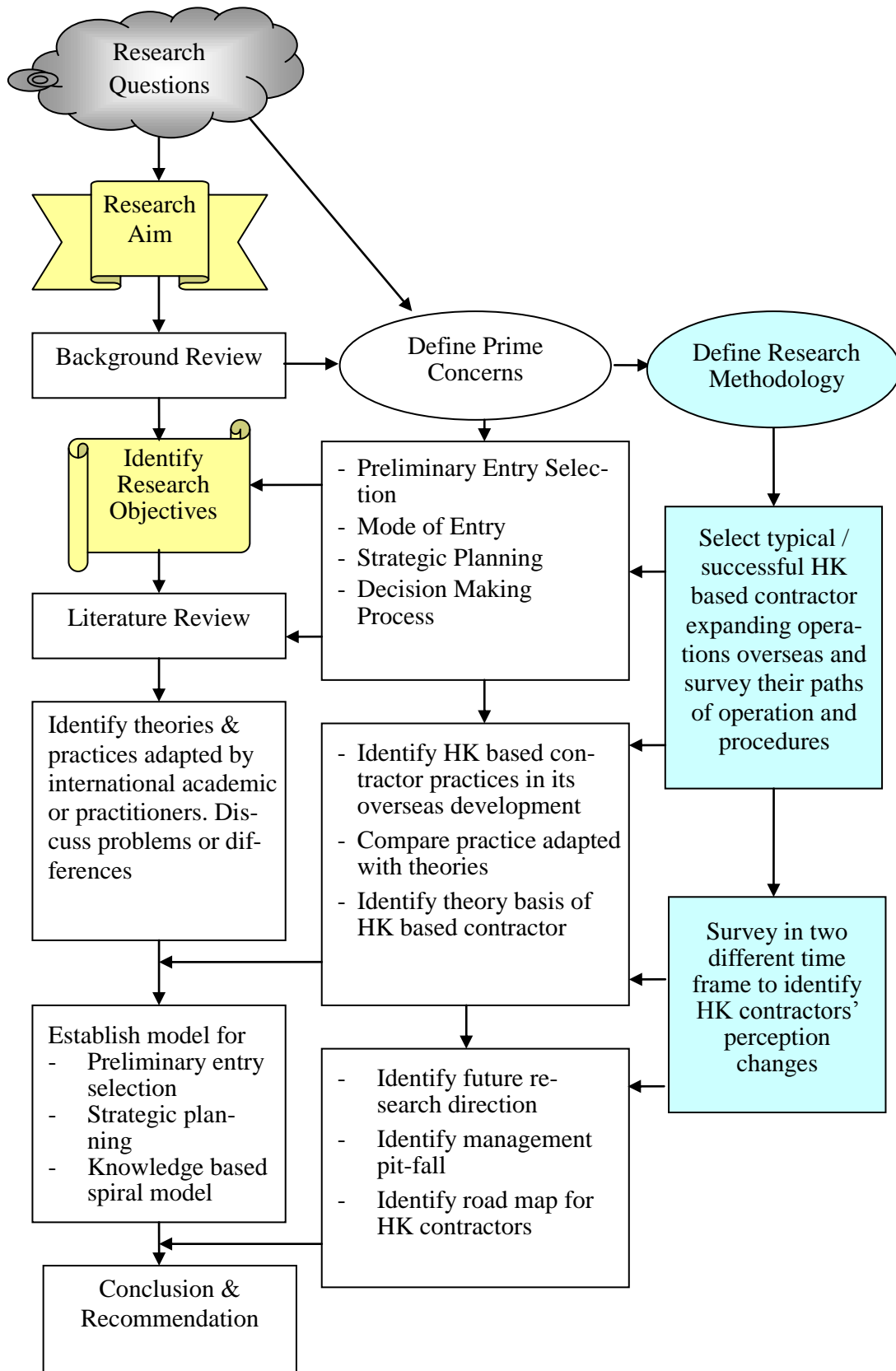
Having a comprehensive understanding of the theories and previous studies in overseas construction business development, the research focuses on a review of the practical aspects of the overseas business development of Hong Kong contractors. An initial survey and a subsequent follow-up survey were carried out during the course of research to ascertain the approach of Hong Kong contractors to overseas construction business development. These surveys were based on the general principles of qualitative research methodology with a pragmatic and descriptive research approach together with the seven-point Likert scale to measure the response. The integration of qualitative and quantitative investigation provides a high degree of reliability, free from observer's bias "in the language of the interviewee" (Adams-Webber, 1989; Smith, 2000 & Wright et al. 2003).

The writer also carried out a practical case study of a Hong Kong based

construction contractor and reviewed the path of this contractor's overseas construction business development. In particular, the author reviewed the decision making processes within the organization and the problems encountered by the contractor in its entry mode, risk management, strategic planning and decision making processes at the entry and tendering stage i.e. pre-contract stage when the firm executes its international business development. The research is based on Participatory Action Research that was considered the most appropriate method because of its self-reflective cycles of planning, observation, implementation, review, and re-evaluation in the area of study. Participatory action research enables researchers to understand the relationship between the research environment, and the actions and consequences in the practices of the participants when blended with theories. The methodology enhances the learning process for all team members based upon their actions or practices. The research was designed to show various ideas, appreciation, critical thinking, learning and practices that may influence findings and provide improvement to the practices of overseas construction business development for Hong Kong contractors.

An overview of the research process is shown in Figure 1.5, The Research Flow Chart.

1.5 Research Flow Chart



1.6 A summary of the research findings and the contribution to Knowledge

Academic researchers and practitioners have established various theories and models to fulfill the long term mission of companies in international business development in respect of environmental scanning, selection of entry modes, strategic planning and business development of an organization. Porter (1980, 1985 & 1990) has provided a comprehensive Five Forces Model including competitive rivalry, market entry considerations, supply power, purchasing power, market entry barrier and alternative selections. Downes & Mui (1998) have challenged Porter's Five Forces by introducing three new forces i.e. digitalization, globalization and deregulation. Porter's Five Forces Model is frequently used along with SWOT (Strength, Weakness, Opportunities and Threats) and PEST (Political, Economic, Social and Technological) analysis. The PEST and SWOT analysis is part of the 'environmental scanning' that includes the organization's internal analysis i.e. strength and weakness analysis and also the micro-environmental analysis i.e. the threat and opportunity analysis together with macro-environmental analysis i.e. the PEST analysis. All the above mentioned characteristics together with their components are changing in respect of time. The knowledge obtained by a company can only be achieved through continuous research, investigation and learning as the width and depth of the international business environment requires time and effort to explore. However, it has to be recognized that these external environmental characteristics have to be integrated with the core capacity of the organization. Such an integration and learning process of external environment and internal environment is critical to the organization to achieve its goal that includes a comprehensive, effective and well-integrated solution to the future challenges and competitive advantages.

The research studies and methodology of this thesis were designed following a thorough literature review in the relevant areas, philosophical

consideration, research selection and research application. The research design and research methods included an initial and follow-up survey to Hong Kong contractors, and a case study of a Hong Kong based contractor. The purpose of the survey was to study the behaviour of the Hong Kong contractors in respect of their overseas performances and prospective. Structured questionnaires and face-to-face interviews with top management of selected contractors were adopted in mixed method studies to generate confirmatory results despite differences in methods of data collection, analysis, and interpretation. This approach provided solid practical grounds where knowledge was gathered and learned. Based on the findings and the understanding gained from this thesis the Hong Kong construction industry is now provided with guidance on its future approach and participation to the overseas construction business development. The case study of a Hong Kong based contractor integrates research methods of first-person complete participation, active participation, and a complete observatory case study that brings together a set of social and collective processes. The researcher and the participants have gained experience and knowledge through the process of research, which directly relates to practical overseas business development. This case study was focused on sense-making and critical reflection of all experience and knowledge gained. From a research perspective, the record of the study is produced by the person who experienced and learned from active participation. The outcomes of this study were developed through a subjectivity-objectivity orientated research approach which integrates complete participation, active participation and complete observation.

This research, based on the action research methodology, carried out an in-depth study through the author's active participation of international construction business development of a Hong Kong based construction enterprise to the various degree of environmental scanning, consideration of various entry mode, strategic planning, tendering and risk management. The researcher's experience is unique to most of the studies as the researcher was participating in the studies in a senior executive

level and was able to obtain and provide extensive insight of the enterprise being studied. The study critically points out the importance of a learning organization (spiral model) together with its flexibility in management (dynamic management). Through the learning and knowledge acquired this research provides and recommends a structured approach in international business development activities with the particular focus on the pre-contract award development stage. This approach is represented by a “*spiral model*” proposed in the research that will allow contractors to have a progressive learning and understanding of the importance of core competence of the organization with the surrounding environment of the targeted nation. The model also provides the progressive knowledge gained in both width and depth related to time. The model specifically identifies the importance of internal and external environmental scanning in respect of time to ensure the width and depth of knowledge gained by the company. Furthermore it is also critical to integrate the external environment with core capacity of the organization. The research also identifies “*dynamic management*” that is a management practice that integrates entry mode, strategic planning, tendering and risk management during the high speed knowledge gain in the “*spiral model*”. In this thesis, the above mentioned conclusions have presented links between the case study and the research. Such knowledge learning through the structured approach is considered to be critical to successful international business development.

Based on the above findings and the case study together with the historic and recent environmental development of the Hong Kong construction industry, it is concluded that Hong Kong contractors may not have sufficient experience or knowledge to explore the international construction market. Past studies of this topic have usually been based on insufficient practical and scientific studies to the approach or behaviour of construction companies that intend to expand their business to the international construction market. It is argued that the research of this thesis has focused upon Hong Kong construction companies and the findings are used as a proxy throughout for international construction

firms. Furthermore the research also formulates a guide line to those contractors who intend to expand overseas construction market for the first time and as such makes a significant contribution to knowledge.

1.7 An overview of the thesis

Chapter 1 provides the background to the research, the research questions, aims and objectives. An overview is given of the research design and methodology and a flow chart of the research provided. A summary of the research findings states the contribution to knowledge

Chapter 2 is the literature review. This includes aspects of globalization, and international business development, business development by construction companies in other countries is reviewed.

Chapter 3 explores Research Design and Methodology. This chapter provides details of research methodologies and research methods in general, followed by details of the approach taken to investigate the research questions investigated in this thesis.

Chapter 4 provides information on the Data Collection and Analysis. This includes the data collected from the two surveys and the detailed case study within a major construction organization. These surveys and the case study, both of which were extended over a four year period, provide a longitudinal study perspective.

Chapter 5 provides a new international business development model for construction industry contractors. Details of the production and verification of the model provided.

Chapter 6 provides a summary of the findings and conclusions from the research together with the recommendations for future research.

The *Appendices* include data related to both Hong Kong and other international markets, data from the organization used for the case study, and copies of the survey documents developed as part of the research.

2. Literature Review

2.1 Introduction

How can international construction activities become effective and worthwhile business ventures? International construction activities are now an imperative of all major construction organizations. Ensuring such overseas construction business development is successful is a critical consideration factor to all contractors in the contemporary rapid changing world.

It is necessary to understand the construction industry development through existing literature in order to provide the foundation for the research studies of contractors developing construction business in overseas markets. This literature review provides a structured approach to introduce the main thinking of the subject area, identifying the main theory, reviewing the theory and identifying the foundation of the research framework.

There are three main areas of focus in this literature review. The first is the issue of the 'construction organization' including the scope of works and the characteristics of a construction firm. The second main area is 'construction business development' in the local and international market. The third main area is the issue of 'competitiveness' including globalization, entry modes, strategic planning, risk management and the decision making process in preliminary international business development stage i.e. pre-contract award stage.

Reviews of competitiveness can be divided into different perspectives. The elements of construction competitiveness include contractor's social influence, technical capacity, financing capacity, marketing capacity, management capacity, and organizational structure and operations (Holt et.al. 1994; Hatush & Skitmore, 1997; Shen et.al. 2003 and Tan et.al., 2007). In this chapter the traditional and contemporary researches for

international business development including their main focus and coverage are reviewed. The main focus and theory developed for international construction business development is investigated to identify their application to the construction firm and in particular to construction firms in different parts of the world. The final section reviews findings in practical and scientific studies on the behavior of construction firms in their international construction business development.

2.2 Construction: a theoretical perspective

2.2.1 Extent of Research of Construction Services

The 'construction industry' is a term that applies to wide range of trades and professions. What is the definition of construction industry? There are many definitions and some are narrow and others very broad. According to WordNet (2006), CBS (2009), the construction industry is an industry that builds housing. However the North American Industry Classification System (2007) defines the construction sector as comprising "establishments primarily engaged in constructing, repairing and renovating buildings and engineering works and in subdividing and developing land". In Hong Kong, the legal definition of Industrial Training (Construction Industry) Ordinance (1999 & 2004) to construction industry is "the industry in which construction operations are carried out".

It is therefore evident that the construction industry is defined differently based on different countries of location. However, the official definition of the government related organizations provides a broader scope to the construction industry. Instead of the simplified definition of construction, construction should be understood as a multi-tasking processes or operations covering many professional activities including design, planning, execution and completion of buildings, industrial and heavy/civil construction works. The scope of construction covers, but is not limited to, foundation, geotechnical, reinforced concrete structure, steel structures, elec-

trical & mechanical, finishing, equipment supply & assembly and a lot more other trades that form integral part of the project. The scope also covers the entire supply chain covering design, supervision, engineering checking, related insurance, manufacturing, supply, logistics, planning, scheduling, tendering, procuring, contractual, legal, financing, information technology, training, safety, environmental, quality, management and practical execution of the project(s). The operators of construction industry include, but are not limited to, clients, client's management team, design consultants, architects, contractors, suppliers, manufacturers, insurance undertakers, utility undertakers, financial bodies, legal advisors and etc.

The definition in the classification of the construction industry by the United Nations Conference on Trade and Development ("UNCTAD") (2002) has grouped a) architectural and engineering design; b) construction and related engineering services in the "construction services sector". However the architectural and engineering services are viewed more as professional services which follows the study of a detailed analysis of construction services that is termed as services trade restrictiveness index ("STRI") (Grosso & Sheperd, 2008). The STRI indicates the most relevant regulatory measures affecting trade in construction services.

In the WTO Uruguay Round negotiation, the secretariat of the WTO (1998) clearly indicated the activities of the construction sub-sector together with related engineering sub-sector had become the "construction and related engineering services sector" i.e. construction is considered as an important sector of the services sector. The secretariat of WTO (1998) has further clarified that this sector includes general construction of buildings, general construction of civil engineering, installation and assembly work, building completion and finishing work and others (pre-erection, foundation works, roofing, concrete, steel bending, demolition, and etc.).

Table 2.1 shows the construction services coverage through the studies of both International Standard Industrial Classification ("ISIC") and WTO services sector classification:-

Table 2.1 – Standard international classification of construction services

United Nation - ISIC Rev. 3.1	WTO (CPC) (1998)
Code 45 - Construction	Construction & related engineering services
451 - Site preparation	512 - General construction work for buildings
452 - Building of complete constructions or parts thereof; civil engineering	513 - General construction work for civil engineering
453 - Building installation	514 + 516 - Installation and assembly work
454 - Building completion	517 - Building completion and finishing work
455 - Renting of construction or demolition equipment with operator	511 + 515 + 518 - Other

The construction industry is therefore an integration of all the firms carrying out construction activities as general contractors, builders, heavy civil engineering contractors, specialist trades, which covers the entire supply chain of all construction implementation and coordination works. There are still a number of different classification definitions adopted by various nations or institutions (refer to S/CSC/W/9 of the World Trade Organization document). When reviewing the definition of construction industry in Hong Kong, USA, UK, Singapore, UK and some developed nations, the definition of construction industry does not deviate from the definition stipulated in Table 2.1. Hence the definition could be considered as a un-

iversally adopted definition. For the purpose the research and this thesis, "construction" shall only refer to construction work implementation/operations as mentioned in Table 2.1 and does not relate to any of the related engineering services which are considered as professional services.

The focus will be contractors of the construction industry.

The construction contractors (hereinafter termed as "contractors") are defined as the firms that implement construction activities as indicated in Table 2.1. Contractors are characterized by their core competence (Lu, 2006; Campbell, 2002) in different type(s) of construction services. Construction services may be considered in two areas of concern:-

- (a) One part is from the clients of construction who need to know how to select contractors (e.g. Almquist et.al., 2007) in terms of firm size, experience, work locations, equipment, licenses, and financial capacity; and
- (b) The other is for contractors who need to know how to improve their capacity in competitiveness in technical know-how policy, strategy, management, resources and etc. (e.g. Lau et. al., 2005).

Research into the provision and delivery of construction services provided by the contractors is increasingly attracting attention from contractors as well as scholars and institutions. A large number of researches and studies have been carried out in various areas of construction services. These researches and studies explore the challenges, expose the opportunities/risks and enhance the performance of implementation of the construction industry.

Existing literature has been provided in-depth studies and understanding as well as providing critics and recommendations in diversified areas of the construction industry including, generally not

limited to :-

- Construction management;
- Construction scheduling;
- Construction tendering;
- Construction risks;
- Global construction expansion;
- Construction technology;
- Building construction;
- Civil engineering construction;
- Construction safety, health and environmental protection;
- Construction contracts (FIDIC, NEC, GMP, Cost-Plus, EPC and etc.);
- Construction financing (BOT, PPP, DFBT and etc);
- Construction alliance and partnership; and
- Construction markets.

This literature review provides valuable support to the improvement of construction industry in different period of history. For the purpose of this research in business development in overseas markets, the literature will be reviewed in a structured and focused manner to review the areas that is more related to the purpose of research of this paper to include the following:-

- (a) International construction firm – definition, characteristics, scope and nature of construction services;
- (b) Overseas business development – globalization, entry modes, strategic planning and risk management; and
- (c) Main scope of contemporary research for international business development for the construction firm – main focus & coverage.

2.2.2 Characteristics of Construction Services

Size of Construction Industry

Construction is one of the oldest industries of the world and it has remained to be one of the core economic activities from early days of human history (Tse & Ganesan, 1997; Hillebrandt, 1985). It is widely acknowledged that construction industry plays an important role in economic functions of various nations (Butkeviciene, 2005; Conway et.al., 2005; Simonson, 2006; Leung & Wong, 2005) and is an important contributor to employment and Gross Domestic Product ("GDP") (Leung & Wong, 2005; Schultmann & Sunke, 2007; Grosso et. al., 2008).

In Hong Kong, there are 261 contractors in the List of Approved Contractors for Public Works and 542 suppliers in the List of Approved Suppliers of Materials and Specialist Contractors for Public Works as of Oct., 31, 2009 (Statistics of the Works Bureau of Hong Kong Government). However the total number of construction firms operating in Hong Kong in 2008 including all public listed and private contractors is around 19,000 with a total employment of 7.6% of the total employed people in Hong Kong (about 270,000 people – HK Census & Statistics Dept, 2009). The Hong Kong construction sector contributed 5 per cent to GDP between 1985 and 2000, before reducing to 3 per cent in 2007(Hong Kong 2008).

Hong Kong is one of 40 countries (including 27 EU member countries) that have signed the "The Plurilateral Agreement on Government Procurement" ("GPA") of the WTO. This means the Hong Kong Government has to procure services based on the principles of openness, transparency and non-discrimination. The Hong Kong construction market including both private and public work is characterized by the engagement of local and international contractors. However, in contrast, Hong Kong contractors have comparatively small exports in construction services compared

with the total Hong Kong construction market. Five years data on the Hong Kong construction market volume and exports in construction services volume (Hong Kong Census & Statistics Dept., 2009a) is shown in Table 2.2.

Table 2.2 – HK Construction Volume and Exports of Construction Services

In Million HKD	2003	2004	2005	2006	2007
Total HK Construction Market	99,033	93,171	90,851	90,230	92,866
Exports – Construction Services	3,968	2,941	2,436	2,083	2,699

Since the start of the 2008 financial crisis, many nations have announced a stimulus plan to boost the nation's economy including, but not limited to, USA, Japan, India, China, Hong Kong and etc. Even though each government has focused on different policies in different key industries, construction related infrastructure investment plays a very important role in these stimulus plans. See for example the Task Force on Economic Challenges (2009). Hillebrandt (1985) critically pointed out that a government's effort in managing a sophisticated and interrelated nation's economy including, healthy balance sheet, effective budget, low unemployment rate and controlled inflation can be achieved with the construction sector reflecting similar economic trends. This reflects the importance of construction. The writer agrees with this perspective of the role of the construction in a healthy economy.

Before the 2008 financial crisis, the Hong Kong government had announced in 2007 a stimulus plan of spending 250 billion HKD in 10 mega infrastructure and district development projects to boost the declining economy. In the financial budget of 2008/09, the Hong Kong government planned to spend 21.8 billion HKD on infrastructure projects for the year and create around 27,000 new construction jobs for the market (HKTDC, 2008). The intention of Hong Kong government was to provide sufficient construction activities in Hong Kong to boost the economy as well as increase

employment rate. How is the construction industry able to help the boost of economy and increase employment rate? Butkeviciene (2005) and Bon & Crosthwaite (2000) have pointed out that increased expenditure in construction activities is probably the most important driving force for OECD nations. Table 2.3 shows the construction sector's contribution to GDP and the construction industry employment rate for selected OECD nations and demonstrates that the construction industry contributes approximately 4% to 6% of the GDP with an employment rate of 5% to 9%.

Table 2.3 – Construction Sector contribution to GDP and Employment for selected OECD nations for Year 2005 (EU KLEMS database, 2008¹)

	Germany	France	Japan	UK	USA
Construction share of total value added	3.9%	5.8%	6.2%	6.1%	5.1%
Construction share of employment	5.6%	6.4%	8.8%	6.9%	6.1%

The construction industry is considered by many institutions (KPMG, 2005; McKinsey, 2006) as a labour-intensive industry. A study by Pietroforte & Gregori (2003) indicates that the construction services also generate significant economic activities in OECD nations through its link with other industries.

When reviewing the construction sector performance in Hong Kong, China and Singapore, the contribution to GDP by construction industry for the last five years is 3% to 6% (see Table 2.4). (It needs to be noted that the construction sector contribution to GDP is defined differently in different nations. It is therefore not easy to get a straight like-to-like comparison between different nations. However, the general trend and importance of the construction services contribution to the economy can be seen through Table 2.3 & 2.4.)

Table 2.4 – Construction Sector's percentage contribution to GDP

	2004	2005	2006	2007	2008
China	5.4%	5.5%	5.6%	5.5%	5.7%
Singapore	3.8%	3.6%	3.4%	3.7%	5.1%
Hong Kong	3.2%	2.9%	2.7%	2.6%	3.1%

Note:

- i. Construction sector contribution to GDP is differently defined in various countries; it is not easy to get straight and like-to-like comparison between nations.
- ii. China figures are from National Bureau of Statistics of China, China Government, Feb 26, 2009, <http://www.stats.gov.cn/> accessed on 21-11-2009
- iii. Singapore figures are from Singapore Statistics, Singapore Government, <http://www.singstat.gov.sg/stats/>
- iv. Hong Kong figures from Hong Kong Census and Statistical Dept., HK Government, Table 036, http://www.censtatd.gov.hk/hong_kong_statistics/statistical_tables, accessed on 21-11-2009

The Eurozone has a total of 10.3 million people engaged construction which is approximately 7.5% of the total working population in 2005. Hong Kong has 230,000 people engaged in construction i.e. 6.8% of the total working population. Other countries also have a similar employment rates for construction. Hence the construction is considered to remain a domestic orientated industry (Eurofound, 2005; BC Stats, 2006). It is important to note that "Construction: A Report on the Industry" (Conway et al., 2005) reported, "25% of the world's workforce worked directly for the construction industry or an entity supporting construction".

The Construction Industry Supply Chain

The construction industry is characterized by large number of small & medium sized construction firms (Rahman et. al., 2004). Hong Kong Trade Development Council (TDC, 2008) has reported the total number of building and civil engineering firms as 19,057 (2006 figures). These firms employed a total of 135,337 employees and had a gross income from construction works of 138.3 billion HKD. Compared with the total number of 803 for the listed contractors and suppliers in Hong Kong Works Bureau (established firms listed as being allowed to tender for construction works for the Hong

Kong Government), there are clearly a large number of contractors performing subcontract works and other types of construction related activities. These small and medium sized contractors perform nearly up to 90% of the project works (Nobbs, 1993; Matthews et. al., 1997). Based on the above, it may be concluded that the construction services sector is dominated by a large number of small and medium sized contractors who perform most of the construction works. These small and medium sized contractors form the backbone of the construction industry in both number of firms and actual share of the works performed.

When reviewing further the construction industry supply chain, it is noted that construction business demands many local products including cement, aggregate, steel, water, cement and etc. Even though some of these material or products can be imported the final product i.e. the completed structure or building must be completely executed in the host nation (Grosso et. al., 2008). Sometimes specialist construction services will also be required to execute specific trades of a project. The upstream and downstream construction industry supply chain covers a wide range of manufacturers, vendors, institutional organizations including, but is not limited to, logistic, transportation, information technology, electrical and mechanical production/services industry, oil & gas industry, insurance services, communication services, legal services, financial and banking services (Wu, 2005; McCrea, 2007, Rahman et al, 2004).

International Market of Construction Industry

According to the evaluation of Global Insight (2009), the global construction market has a total value of 5.5 trillion USD in 2009. Reviewing the international market, Reina & Tulacz (2009) have reported that there are 177 international contractors with more than 1 billion USD of cross-nation revenue in 2008. Furthermore, the top 225 international contractors have generated a total of 390 bil-

lion USD in revenue in 2008 which is a 25.7% increase compared with 2007. According to Conway et al (2005), the global construction industry is the single largest industry in the world. The largest international market is Asia & Australia including Middle East and followed by Europe (Reina & Tulacz, 2009). Interestingly the Africa construction market has increased to 13% of the total revenue of the international contractors and is only 1% less than the North American market. The transportation sector, mainly refers to transportation related infrastructure works, remains the largest construction sector followed by building and the petroleum market sector. This is strong evidence that the “distance effect” is reducing due to globalization influence even though construction industry was historically recognized as a domestic industry to any nation (Hegre et al, 2001).

The tendency of establishing new markets through the selection of appropriate entry strategies is now widely adopted (Chen, 2008). It is one of the important characteristics of construction contractors to expand from domestic market to international market. However cross-nation trading for a large number of construction industry contractors remains to be “technically not feasible” for many organizations mainly because of the difficulties in monitoring the movements of personnel cross borders, movements of equipment and material, movements of capital, transfer of technology and policy transparency (World Trade Organization, 1998).

Both the private sector and government/public sector procurement are important driving forces of the construction services sector (Grosso et al., 2008). However the construction market is also tending to merge the private sector with the public sector through Private-Public Partnerships (PPP) and Build-Operate-Transfer (BOT) in infrastructure and services orientated services projects which will release the financial budget pressure of the government (PriceWaterhouseCoopers, 2005). These types of arrangements offer new opportunities to construction contractors seeking to ex-

tend their area of business.

It is noted that certain early research on the theory of firms was carried out by Coase (1937) who introduced the concept of transaction costs to explain the nature and limits of firms and currently influences modern organizational economics. It is only in the last two decades that the importance of the business firm constrained by complex market mechanisms including economies and information complexity causing firms encountered market failures has been recognized (Arrow, 1969 & 1974; Williamson, 1971; Milgrom & Roberts, 1988). The theory of firms has developed the basic principles of organizations, in particular that their choice between firm or market influence is to optimize profits based on cooperation and the necessary equilibrium of various market elements (Hart & Holmström, 1987; Guesnerie, 1994). Based on these perspectives, the probable dominant basic perspective of the firms in today's world economy is that their growth is dependent upon their ability to create new knowledge and to replicate this knowledge so as to expand their market. Their business advantage lies in being able to understand and carry out this transfer of knowledge more effectively than other firms.

The overseas transfer of firm-specific advantages is a key factor of success in Multinational Enterprises (MNEs) (Dunning, 1958; Hymer, 1976). These advantages are usually geographically diversified in nations where MNE subsidiaries or branches perform their activities (Dunning, 1995; Rugman & D'Cruz, 2000; Tsai, 2001). To ensure the performance of the firm is satisfactory, there is a need to transfer the capability knowledge effectively to the local firms (Martin *et al.*, 1995). People cannot take it for granted that the knowledge transfer through these firms can be problem-free (Martin & Salomon, 2003) yet such effective capability knowledge transfer is crucial and sometimes even costly (Dunning, 1993; Teece, 1977). Rugman & Verbeke (2003) have pointed that the complexity associated with the transfer may be serious. Kogut &

Zander (1993) also critically pointed out that the underlying difficulties and barriers may lead to the ill-defined theory. Araujo (2007) further argue that MNEs have major difficulties in transforming firm-specific advantages because of the relatively low capacity to gain knowledge from locals experience of own international units or other international firms, which may sometimes be due to cultural impact.

Corruption as negative Impact in Construction Industry

There is a commonly known negative characteristic of construction services that is corruption. Heimann & Dell, (2009) have critically pointed out that there is evidence to show that in construction business development there are a wide range of illegal payments made intending to influence officials or political parties in many countries of the world. The difficulties arise from the large number of widely spread supply chain stakeholders who are involved in the construction industry and the limited organizations that can oversee the industry (Stansbury, 2005). In UK, the Chartered Institute of Building (2006) has indicated that corruption is very often observed in the UK construction industry. Labelle (2010) stated that all the G20 members commit to the ratification and full implementation of the UN Convention against Corruption. It is recognized that the construction industry has a very long supply line and a large number of persons from all levels are involved in the chain. Whilst all construction related persons should avoid involved in corruption, it is understood that corruption in the construction industry has long history and requires the industry together with the government to fight against corruption.

In the overseas construction business development, corruption will be frequently observed and occur during its course. In particular, the fast economic growth of a lot of East, South and Southeast Asia region, countries are suffering from corruption. However at the same time, there are outstanding examples of transparency

and accountability in the region including Hong Kong, Singapore and Japan. The corruption issue is a serious phenomenon and requires organization together with government to act together and fight against it. For the purpose of this thesis, it is a part of the social environment that needs to be understood and acknowledged. Anti-corruption is an obligation and social responsibility of an organization but its study shall not form a core context of this thesis.

Competition in Construction Industry

Tight competition is also a major characteristic of the construction industry. It is, therefore, important for the construction firms to build up a firm-based strategy in order to safeguard its sustainable competitive advantage (Teece et al., 1997). How can a construction firm build up the firm's competitive advantage in a drastically changing environment? It is important to understand the meaning of competitive advantage of a construction firm.

The firms of the construction industry are sensitive to the margin attainable in the highly competitive market (Conway et al., 2005). Hence it is crucial that construction firms achieve and sustain their competitiveness in the contemporary rapid changing construction market (Rumelt, Schendel & Teece, 1994). Competitiveness must become an advantage of a construction firm in order to survive in the highly competitive construction market. The source of competitiveness comes from the core competence of the firm in which the firm's skill/operations/performance is better than its competitors (Hamel & Prahalad, 1994). The dominant paradigm is rooted in the structure – conduct - performance of the industrial organization (Mason, 1949; Bain, 1959). Later this was developed by Porter (1980, 1985 & 1990) in emphasizing the five competitive forces. Porter's model provides a well-tested and comprehensive perspective for assessing and analyzing the competitiveness of an organization. Porter's five competitive forces include competitive rivalry, market entry considerations,

supply power, purchasing power, market entry barrier and alternative selections. Porter's Five Forces Model of Competitive Position is demonstrated in Appendix M. In the diagram Porter's Five Forces model contributes various points that he suggested where one can develop a more detailed analysis of the organization's competitive position. Through such analysis, the organization is able to develop its appropriate strategic planning or necessary decisions. The Porter's Five Forces model should be considered as a good analytical tool in conjunction with SWOT and PEST analysis, which will be discussed in the forthcoming sections. The Porter's Five Forces model has a lasting influence in strategic management in the eighties. However Downes & Mui (1998) challenges Porter's Five Forces by introducing three new forces i.e. digitalization, globalization and deregulation. Downes specifically critiques Porter's model focus too much on economical conditions and cannot capture the occurring environment during drastic changing periods of an industry. In fact, Porter refers these forces more to the micro-environment rather than the macro-environment as these forces are considered to have close relationship with the performance of the organization. The organization has to re-assess the market environment in the event that the forces change or the profitability is reducing where the organization has to review the core competence to check whether the organization's maintains its competitive edge with its rivals and enhance their margin.

Competitive advantage can be sourced from various elements including, but not limited to, time (Stalk, 1988; Nunes et al., 2009); organizational learning (Garvin, 1993; Prahalad, 1997; Mitsuhashi & Yamaga, 2006); technology advantage and organizational capability (Harvey, 1994; Yeomans, 1992; Laborde, & Sanvido, 1994; Bonke, 2000). It is important for the organization to identify and enhance its capabilities and skills in ensuring its survival in the changing environment and may be extend its ability to innovate its

capabilities in a sustainable manner (Anjana, 2002). This is expanded to the terminology “core competence” of the construction firm. According to Hamel & Prahalad (1990), core competence is defined as “*the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technology*”. Hamel and Prahalad (1994) further define core competence as the blending of skills and technologies that enable a firm to provide specific value to customers. Core competence is not product specific, but the ability to contribute to the firm’s competitiveness through various products or services. Hence, core competence is a critical basic element of competitiveness. In the modern construction industry, the core competence concept has further been expanded to a wider scope that is described as the four prime prospective by Kaplan & Norton (1992, 2001 & 2005) including learning & growth prospective, business process prospective, financial prospective and customer prospective. Core competence is also affected by corporate management (Ramaswamy and Namakumari, 1996), organizational communication (Minzberg 1994), corporate strategy (Goold and Alexander, 1995), organizational processes (Goldhar and Jelinek 1983, Kesler, Kolstad and Clarke 1993), decision making processes (Drucker 1994, Prahalad and Thomas 1977), culture, attitude & behaviour (Chaudhary 1979, Trompenaars, 1998), and etc.

From the review of this literature, it is clear that the trend of management is to improve or develop the core competence of the firm that will in turn enhance the firm’s competitive advantage in its domestic or international markets. Here a problem arises because, when changing the core competence of a firm, it is necessary to pay particular attention to growth of the capabilities through learning that will lead the firm to its competitiveness or even leadership in its market sector. Hence effective management and organizational processes become more important to the firm than focusing only on refining core competence. Such mul-

ti-dimensional elements in management and organizational process improvement will be studied and discussed further in this thesis. The thesis seeks to identify the dynamic, innovative, sustainable and responsible management processes that over time will evolve to assist the construction industry contractors to explore and create their own competitive advantages in this highly competitive construction market.

This section has provided an overview of the construction industry that is a collective term covering all the firms that perform construction activities. The review does not cover any of the related engineering services. It has shown that the construction sector is an important contributor to the GDP and employment of most countries even though the definition of construction sector may be different in different countries. A crucial characteristic of the construction firm is its competitiveness. The opportunities offered in the domestic market as well as international market do not relax the needs of survival or sustainable development expectation of the construction firm. In particular, the 2008 global financial crisis has induced opportunities of the international construction market which is important to economic recovery of most nations. However, it is noted that it is not feasible for all construction firms to embrace international development. Hence international construction business development requires addressing the key aspects of competition including core competence, management and operational processes. This is considered and studied further in the following sections of this thesis.

2.3 International Construction Business Development : a theoretical review

2.3.1 International construction market review

Looking back to the beginning of human history, business has stretched way beyond tribal regions, countries and subsequently continents. There is evidence of international trading around the Mediterranean Sea developed by the strong Greek and later Roman Empires. Cross-national construction activities could also be traced back many centuries. For example the Taj Mahal in India was constructed in 17th century combining Hindu, Persian, Turkish and Mughal architectural elements (Hasan, 1994; Lesley, 2003) together with a mixture of religious elements including Muslim, Hinduism and Persian (Tillitson, 1990). Craftsman including Indian, Persian and Turkish workers came together in Agra to construct this 7th Wonder of the World.

The global construction industry has become more important to the construction contractors and is probably the biggest industry in the world (Conway et al., 2005). In 2004, the total value of global construction industry exceeded 4 trillion USD (Tulacz, 2004). In 2009, the forecasted total value of global construction industry activity expands to 5.5 trillion USD (Global Insight, 2009). It is interesting to note the ratio of the international construction revenue to total revenue of the largest construction firms listed in the Top 225 International contractors in 2008 (refer to Table 2.5). The highest international volume is 97.3% and the lowest is 37.1%. Further it is worth to note that 8 out of 10 of these contractors have an international volume ratio higher than 60%. It is quite clear that international construction activities are becoming the prime business activities of these firms.

Table 2.5 International Volume Ratio of Top 10 International contractors 2009

Firm	Int'l Revenue (\$mil)	Total Revenue (\$mil)	Ratio
Hochtief (Germany)	26,181.8	29,284.4	89.4%
Vinci (France)	18,489.3	49,901.0	37.1%
Strabag SE (Austria)	15,946.1	19,101.4	83.5%
Skanska AB (Sweden)	15,050.1	20,283.9	74.2%
Bechtel (USA)	13,984.0	21,659.0	64.6%
Bouygues (France)	13,567.0	34,405.0	39.4%
Saipem (Italy)	11,665.0	12,204.0	95.6%
Bilfinger Berger (Germany)	10,757.0	15,802.0	68.1%
Technip (France)	10,701.0	11,002.0	97.3%
Bovis Lend Lease (Australia)	9,241.9	11,255.3	82.1%

Source: ENR Top 225 International Contractors 2008, Vol.263, No. 7, 31 Aug., 2009

Reviewing the international volume ratio of Chinese contractors from the same source (refer to Table 2.6), it is noted that only Zhonghao Overseas has 100% international exposure which indicates the firm is an overseas construction works orientated firm. All other large Chinese construction firms have less than 25% of their revenue from international revenue. It can be observed that Chinese contractors have commenced their international exposure in the last decade and are still not compatible with the large international contractors in the international construction market. But their exposure is increasing rapidly. The number of Chinese contractors included in the Top International Contractors have increased from 33 firms in 2000 and increased to 50 in 2009 (ENR, 2000 & 2009a). The total international revenue of Chinese contractors listed in Top International Contractors has also increased from 6.1 billion USD in 2000 to 43.2 billion USD in 2009 i.e. 7.1 times in total revenue.

Table 2.6 International Volume Ratio of Largest Chinese contractors 2009

Firm	Int'l Revenue (\$mil)	Total Revenue (\$mil)	Ratio
China Railway Group	1,337.8	34,548.1	3.9%
China Rail Construction	1,957.1	32,417.1	6.0%
China State Construction	3,523.2	27,659.4	12.7%
China Communication	5,858.8	25,965.9	22.6%
China Metallurgical	1,372.6	23,314.4	5.9%
Shanghai Construction	646.2	10,062.4	6.4%
Sinohydro Corp	1,804.1	8,922.9	20.2%
Zhonghao Overseas	7,671	7,671	100%

Source: ENR Top 225 Global Contractors 2008, Vol.263, No. 7, 31 Aug., 2009

In comparison with Chinese contractors, Hong Kong contractors have an export of construction services of only 2% to 3% of its market volume (Hong Kong Census & Statistics Dept., 2009a) (refer to Table 2.7). It is also noted from the annual reports of China State Construction International Holdings Ltd. for 2005, 2006 & 2007 that the international revenue takes up to nearly 90% of the Hong Kong construction export volume in 2007. Hence it is particularly interesting to look into the international business development model of China State Construction International Holding Ltd. This was the rationale for the selection of China State Construction as the Case study for this research.

Table 2.7 Hong Kong Contractors International Construction Volume

In Million HKD	2005	2006	2007
Total HK Construction Volume	90,851	90,230	92,866
Total HK Construction Export	2,436	2,083	2,699
Construction Export Ratio	2.6%	2.3%	2.9%
China State Int'l Holding Ltd. Int'l Revenue	0	1,249	2,416
% of China State Int'l Holding Ltd. vs. Total HK Const. Export	0%	60%	89.5%

Reviewing the world's construction market in 2007, the total global construction market was 4.7 trillion USD. USA remains as the largest construction market and followed by Japan and China.

However, when reviewing the growth rate China and India, both are above 8% and well above the remaining top 8 nations of which are between 2% and 5% (Davis Langdon, 2008). When reviewing the China construction market valued at approximately 602 billion USD in 2007 and USA construction market, which approximately 1,030 billion USD, we need to consider the construction cost difference between the two countries. The size of China construction market is only about 60% of the US construction market. However, taking into consideration of the cost effect (Rider Levett Buckell, 2009), the highest construction cost of premium offices in China is 9,200 CNY per meter square of gross floor area (approx. 1,347 USD) and compared with the same cost for the USA is 3,400 USD. From the construction point of view, the China construction market could be 2.5 times bigger i.e. the China construction market is practically larger than the USA construction market.

For the purpose of this thesis, it is important to outline the following questions that arise from the above data:-

1. Each nation has its own construction market, why are larger construction firms continuing their efforts in expanding their construction business overseas?
2. If the end product is constructed in the host nation, why is there still a strong tendency of construction firms in strengthening cross-nation construction activities?
3. Each nation is offering great opportunities for international construction firms to expand their business. How contractors are implement their cross-national construction business development?
4. Should competitiveness become the more focused goal of the international construction firms in cross-nation construction activities?

To review and answer these questions, it requires consideration of globalization of the construction industry.

2.3.2 Globalization of the Construction Industry

Bernstein (2008), Vice President, Industry Analytics, Alliances and Strategic Initiatives at McGraw-Hill Construction, critically points out: "Construction activities are becoming increasingly global. The financial and building trends in one country are largely impacted by social and political events in other areas of the world. It is important that we understand these trends and how they will impact the work that we do today and in the future."

Globalization is a popular topic and is widely studied. Hence the characteristics of globalization may be reviewed:-

2.3.2.1 Globalization

The term "Globalization" was widely used in the 60's of the last century and becoming very popular in the late 80's. However the definition of globalization is widely diversified as well (Hopkins, 2004; Sassen, 2006; Palmer, 2002). In general, globalization is commonly known as the driving force through the integration of economic, political, technological, social, cultural, environmental, health, security and other factors (Croucher, 2003). A good comprehensive overview of the definitions of "globalization" has been prepared by Dr. Al-Rodhan & Ambassador Stoudmann (2006). They also conclusively defined globalization as *"a process that encompasses the causes, course, and consequences of transnational and trans-cultural integration of human and non-human activities."*

Yeates (1962) criticized the financial forces of globalization as one of main factors causing World War I. According to Encyclopedia Britannica, in the mid-decades of the twentieth century the global expansion of the western multi-national firms where new technology and products became the main driving forces push globalization to a new horizon. Even though the

globalization effect has been apparent for some time since then approximately 45% of the global wealth has been destroyed in a very short period of time starting from late 2008 due to the global financial crisis (Schwarzman, 2009). As a result, globalization has induced much diversified reactions. There are politicians, scholars and activists who see globalization as positive force to drive the world economy (Friedman, 2000; World Bank, 2002; Bauman, 2000; Micklethwait & Wooldridge, 2000; Nikitin & Elliott, 2000; Thompson, 2007) whilst others see it negative to the world economy system (Beck, 2001; Shaw, 2000; Berger & Huntington, 2002; Ritzer, 2003; Nikiforuk, 2007).

In general, the positive sides of globalization usually include, but are not limited to, the following:-

- money is like a snow ball and generally it is the rich developed countries that makes firms more successful and people more wealthy;
- global competition induces creativity and keeps product/services prices in more affordable standard;
- developing countries are able to enjoy the advantage of developed technology and experience in management without going through the similar pains during development;
- governments are able to work in alliance towards common goals with common awareness, interaction, coordination and communication; and
- there is greater access to cross-national culture through internet, media and etc. making the distance between countries diminishing.

The negative aspects of globalization usually include, but are

not limited to, the following:-

- job opportunities decrease in a nation due to outsourcing to other lower cost nations;
- the culture of a nation, individually or collectively, begins to fade during the melting with foreign culture(s);
- hygiene conditions become a great worry e.g. bird-flu and swine-flu that are invading nations through free and non-defensive cross-national flow of people;
- inadequate law, regulations or agreements among the nations to systematically prevent/control safety and environmental issues;
- major developed nations are dominating financial tools including World Bank, International Monetary Fund and others to force developing countries to comply with the rule of the game they set; and
- insufficient financial and technical contribution/assistance from developed nations to the developing countries to overcome global threads e.g. global climate threads.

No matter *how* globalization is influencing the whole world, we cannot deny that globalization has already influenced every person and may be expected to continue to do so. Globalization is evolutionary; it is a fluid process that is constantly changing with the development of human society (Al-Rodhan & Stoudmann, 2006). Hence we need to consider this process. Hence, this thesis will focus on the aspects that Russell (2000) proposed: world economy, potential advantages and risks arising from globalization of construction industry and the development of international construction business.

2.3.2.2 Globalization of the Construction Industry

As discussed in 2.3.1, the international construction industry has experienced prosperity and opportunities around the world. How do we see the trend of globalization in construction industry? Raftery et al. (1997, 1999), Ofori (2003), Chiang et.al (2004) and Schulte (2004) have provided certain insights. These studies support the view that globalization in construction industry is realistic and is unstoppable. These studies also show that the less-competitive contractors may be difficult to survive when they are exposed to waves of globalization.

Ofori (2003) points out that globalization is a realistic trend and there are unavoidable arguments from both positive and negative sides. It is apparent that the large international contractors have a major proportion of the international construction market. Ofori (2001) critically points out that the international contractors take up about 75% of the South Africa region construction market share even though some of the Southern African countries have granted preferences to local contractors. The force of globalization, in particular funds from World Bank and International Monetary Fund, has opened up the construction market in South African region to international contractors.

In a review of globalization of construction industry, Raftery *et al* (1999) critically points out some of the negative impacts of globalization include the following:-

- induce risks in causing unrecoverable damage to domestic construction industry and its supporting industries due to competitiveness;
- clients favour with bias to international contractors as they own advanced construction technology and management skills;

- modern construction related procurement arrangements (BOT, PPP, BT, etc.) favour stronger financial backing and technical advantage which are the traditional advantages of the international contractors coming from developed countries;
- contractors from developing countries will be restricted due the above two items except where labor-intensive projects are involved which is usually the lower end of the value added construction projects;
- large and qualified international contractors from developed countries are dominating most of the large-scale construction projects of the world, which makes the small and medium sized contractors of the local market non-competitive and unable to get sufficient qualification for their future expansion.

Ofori (2000) further elaborated on the analysis of Raftery et.al. (1999). He is particularly concerned about the impact of globalization on diminishing business opportunities and the insufficient competitive capacities of the local firms. However, Ofori has critically pointed out certain positive impacts of globalization: developing nations are able to construct some high-tech projects that local contractors had no experience to construct and also local contractors acting as subcontractors or joint venture partners are able to learn advanced technical/management skills from these international contractors. Ofori also points out that international contractor organizations are able to secure international financing to assist the nation to implement sophisticated major projects which further will increase job opportunities.

Ngowi et al. (2005) also reviewed the globalization of construction industry and pointed out that the international con-

tractors from both developed countries and developing countries have similar opportunities in the international construction markets opened by WTO protocol. There are more and more international and local contractors forming alliances to tackle major projects in the international construction markets simply due to the global integrated economy inducing market demands, technology requirements, qualification needs and quality with cost considerations (Graham 2000, Mitropoulos and Tatum 2000, Schimming 1993) even though such temporary alliance structures are vulnerable due to self-protection by individual firms (Cherns and Bryant 1984, Newcombe 2000, Walker 1996).

2.3.2.3 Dimensions of Globalization for the Construction Industry

The globalization of construction is usually derived from geographic, procurement and resources components of the international construction management activities driven by the need of international construction development.

It is well known that globalization makes reduces the geographic distance effect (Daly, 1999). People get used to living in a stable and familiar environment. Hence new geographic locations are always a challenge to people who have to live in alien country. They have to experience and engage in totally alien cultural, political, economical and social environment which is not preferred and difficult to be understood (Weiland, 2004; Gilinskiy, 2008).

From a conceptual point of view, Gunter & Hoeven (2004) point out that the globalization process should best be split into two parts. The first group of factors including trading, investment, technology, cross-border production systems, communication, and information flows have brought integration of economies

and societies but also marginalized countries and individuals. The second group of factors including trade and capital market liberalization, international agreement on intellectual and property rights, policies and behaviours unification, and the social welfare interface has increased homogenization of policies and institutions across the world.

It is quite evident that globalization is irreversible (IMF, 2008). Hence it is important to pay attention to the dimensions of globalization which will impact the construction industry. The impact to the construction industry has a number of the social aspects besides the corporate concerns. These include employment, working conditions, welfare to employers, cultural influence and others. On the corporate dimensions of globalization, it is usually condensed and referred to as "competitiveness" (Garelli, 2003).

2.3.2.3.1 Social Dimensions

According to Gunter (2004a), a literature review of social dimensions of globalization was conducted by the World Commission on the Social Dimension of Globalization, established in 2002, reviewing over 1200 articles and texts. The main social dimensions (Gunter & Hoeven, 2004) include, but are not limited to, the following:-

- *economical environment* including GDP and its growth rate, international trade information, international capital including foreign direct investment ("FDI") & portfolio investment, international production (Emadi-Coffin, 2002) and others; and
- *Globalization process and social dimensions* including impact on wages and employment (Ghose, 2003; Freeman, 2003; Gereffi & Sturgeon, 2004), impact on widening of rich and poor that affects not

only among people but also among nations (Prasad et al., 2003; Agénor, 2002, Lucas, 2007), cause of inequality (Stiglitz, 2003; Burtless, 2002; Milanovic, 2002, Bivens, 2008), increase global insecurity (World Bank, 2002; Scheve & Slaughter, 2002; Garfinkel et al., 2009), impact on policies to nations/institutions (Lee, 1998; Torres, 2001; Ocampo & Martin, 2003), impact on culture (Baughn & Buchanan, 2001; Adams & Carfagna, 2006; Giennow-Hect, 2006) and requirements in international agreement (Siebert, 2003; Halbert, 2005; World Bank, 2002).

All these social factors have collateral impact to the construction industry together with all other industries (Fosu, 2004). In fact globalization is not the only factor affecting people's lives. The role of the markets and society together with people who has different needs is actually making the social impact of globalization more difficult to justify. It is widely argued that the progress of globalization is the cause of unfair rules of global economy. People are biased in favour of rich and poor but ignoring the social impact from the political and economic policies (International Labour Office, 2004). Governments and institutions (Carr & Chen, 2003) are working hard in setting and enforcing globalization process based on shared values of the social dimensions mentioned, but not limited to, the factors listed above. It is well understood that there are positive and negative considerations of globalization. However, a fair, inclusive, reasonable and commonly adapted process that can provide opportunities and tangible advantages for most should be feasible even though ambitious.

2.3.2.3.2 Construction Related Dimensions

Manley (2004) critically points out that globalization in the construction industry has induced strong "market pull" to encourage industry to improve performance as well as many successful innovations. Hence in order to look into the dimensions of construction influence by globalization, we have to identify the significant technology and social changes of the past decades (Blough, 1983; Allen, 1994; Bowen, 1996; Gyi et al. 1999; Baumann, 2000; Bon & Crosthwaite, 2000; Clarke, 2000; Harvey, 2000; Mackenzie et al, 2000; Connolly, 2001; DFID-UK, 2001; International Labour Organization, 2001; Office of Industrial Technologies, 2002; Tam et al., 2007; Portland Cement Association, 2010).

From the technology point of view, it is noticed that the following are more significant to the evolving of the construction industry through individual effect or integrated effect:-

- widely adapted office computer applications with drastically improved micro-processing chips, GPS (global positioning systems), sophisticated software programs including CADD (Computed-Aided Drafting and Design), total station for surveying, portable calculators, remote monitoring system that assist the industry to change from people orientated to capital-intensive, reduce the dependence of work place, increase calculation capacity and reduce time;
- change of contract models from simple construction projects to sophisticated packaging financing, construction and delivery including D&B (Design &

Build), EPC (Engineering Procurement and Construction), PPP (Public Private Partnership), BOT (Build Operate & Transfer), Partnering adapted in New Engineering Contracts (UK), Project Management, Construction Management, Guarantee Maximum Price, Cost Plus and others;

- provision of light, durable materials including fiber optics, alloy, fiberglass, and etc. that would cut down demands in natural resources;
- improvement of communication systems from telephone and telegraph to the wide application of internet, mobile phone, web-based database service, fax, video conferencing system, and etc.;
- emphasis in non-engineering disciplines including environmental, health, human resources, financing, sociological, safety, risks and legal implementation;
- improved plants and equipment improving productivity and also blended with enhancing logistics capacity, domestic/inter-regional/international products flow motivating more high-value/low-volume projects; and
- improved technology increased the use of prefabricated elements.

However, from a social and political prospective, the changes are blended with increased opportunities and draw-backs:-

- ending the cold war after the fall of Soviet Union but rising the local protectionism and terrorism;
- rising of global economy conflicts and in particular the conflicts between developed nations and de-

veloping nations arising in the last decades;

- growing concern of natural resources including crude oil, coal, steel, wood, cement and etc.;
- increasing attention to transparency, public community and stakeholders participation;
- closer attention to international flow of labour force;
- increasing concern on cultural conflicts or cultural invasion;
- increasing concern in cross-national trade regulations and extending to health, security, environmental and climate concerns;
- weakened national policies in confrontation with cross-national business environment; and
- increasing importance in global financial network influence with government budget of a nation.

Based on construction related changes related to globalization, it is important to review the dimensions of construction industry that respond sensitively to global competition.

Firstly, it is well known that construction products are local i.e. the end product must be totally constructed locally. This induces a long term relationship between the contractor and the client. Hence the exportation of cross-national construction services is a production process rather than the end product. Secondly, the lengthy supply chain and/or value chain is also providing major influence to the construction industry. Thirdly, the competitiveness of construction industry is vulnerable to changes of environment that includes the above

mentioned social and technological changes in the last decades. Hence it is critical to identify the construction services should be considered more from a global or multi-domestic type of industry.

In the competitive world of business, the bottom line goal of all firms is to survive. Survival through competition is based on the planning and implementation of strategies that are sophisticated process of choices including activities, resources and market positioning (Rumelt, Schendel & Teece, 1994). From a different approach, the nature and function of markets may also determine the theory of competition (Porter, 1980, Kogut, 1991). Hence the mutual influence of strategic planning leads to competitive advantages and the market environment induces organizational strategic planning explaining the close interrelationship of them both. Even though Prahalad & Doz (1987) lead in emphasizing management actions and strategic processes in the globalized construction business, other groups of scholars critically point out the importance of a "knowledge-based" view of strategy where the firm-specific resources and capacity is able to provide stronger forecast in performance than the industrial characteristics (Ribiere, Park & Schulte, 2004). It should be noted that these different approaches in research are based on data and cases of manufacturing industry. This may have limited applicability to the construction services mainly because of the wide range of activities that are becoming an integral part of the value or supply chain. According to Enderwick (1989), services are linked to the sales of products which are tied to sales of services as they are interdependent.

Based on the above characteristics, it is important to

review the industry nature and the strategic responses of the major international competitors within the construction industry. Schulte & Jackson (2007) conclude that technology could be procured worldwide and products are highly service orientated with serious government intervention observed. They further state that the preliminary phases of the international construction project life-cycle: pre-contracting, contracting, construction, operation and phase-out including global integration and local responsiveness are both powerful and important.

The construction related dimensions involve a wide range of coverage. From the stakeholders' point of view, this includes dimensions covering the sophisticated value chain. This is more locally orientated because of the strong involvement of local clients and other stakeholders inclusive of utilities undertakers, services providers, local material suppliers, local labour suppliers or local subcontractors. From the international point of view, it may involve financial supporters, contractors, specialist subcontractors and specialist equipment providers.

From the time span point of view, it covers various stages of project life-cycle:-

- pre-contracting phase - strong engagement from both international and local for market entry or face competition;
- negotiation and contracting phase - local engagement will be dominant whilst international involvement will also play an important role;
- construction phase - local forces of the value chain

inclusive of construction management, resources allocation, work execution, valuation, contract administration, billing and payment are local dominant as international forces can only play a supporting role unless the supplies that are manufactured in foreign market(s);

- the operational phase is also locally dominant including final adjustment, follow-up and training except minor components that require foreign support; and
- phase-out is nearly totally local as it is time to prepare the final account, realize profit, complete tax clearance, fulfill obligations and withdraw resources.

Further the dimensions are blended with separate but interrelated construction-specific issues including managerial, technological, financial, social, political and product-orientated issues. These construction related dimensions include, but not limited to, the following major issues:-

- marketing - international/domestic economy, entry mode, market sector
- strategic planning - decision process, leadership
- human resources - collaboration, culture, sustainable development
- competitiveness - productivity, procurement, quality, safety & health
- knowledge - technology, information technology
- financing - accounting, financial

- management - risk management, construction management, and
- commercial issues - legal, contractual, business development.

It is impossible to review in detail each of the above items. The following items, including strategic planning, cultural collaboration & risk management for international business development, were selected from the literature review and supported by the case study example as the primary items of focus because they were identified as items critical to the success of overseas business development.

As mentioned by Schulte & Jackson (2007), the pre-contracting phase of the project life-cycle is an important dimension for global construction industry. The literature review of this study will primarily focus in the pre-contracting related issues which will be reviewed and studied in the next section.

2.4 Competitiveness and Associated Business Development Theories

There is a growing convergence of domestic and global construction markets. The business sector has noticed that there are many international contractors competing in the domestic market of a nation. The construction firms are feeling the global pressure for economic competitiveness where they have to achieve and sustain competitiveness in such a challenging global construction market. When these construction firms are able to compete with international contractors and also acquainted with the international 'rules of game' they will commence looking into the possibility in overseas construction business development and become international contractors competing in the interna-

tional construction markets.

What is overseas construction development and how to define international construction contractors? Casson (1982) defines multinational enterprises ("MNEs") as firms that own output of goods or services originating in more than one country. Oman (1984) further expanded the definition to accommodate international investment including licensing and contract management. In fact, the author believes the most appropriate description of an international firm is that provided by the Financial Times (1997):

A global firm operates, or actively aspires to operate on a global scale. It thinks and acts in terms of world market share, not just local or regional penetration.

Even though international construction activities have been going on for centuries, practical research into international market entry strategy and cross-culture collaboration in construction operations are limited (Tan, 2002; Husted & Allen, 2006; Wang & Schulte, 2005; Venaik et al, 2005; Schulte & Jackson, 2007). Particularly for the Hong Kong construction industry, studies in these integrated areas are even more limited.

Schulte & Jackson (2007) studied the international construction industry and argued that the existing models including Prahalad & Doz (1987), Porter (1990), Bartlett & Ghoshal's model (1991), and Vereecke et al. (2006) do not capture the complexity of the business environment as well as the international contractors' strategic responses. Hence they have modified the models to assist executives to have better insight and develop viable strategic response. However their study is based on modifications of past studies and has incorporated only one practical case study i.e. acquisition case of Jacobs Engineering Group (Rubin, 2007).

Base on the studies of the above mentioned literature study, the author agrees with Schulte & Jackson (2007) that pre-contracting stage is an

important dimension for global construction industry. Hence this thesis studies the pre-contracting management of Hong Kong contractors expanding their business to overseas markets. The focus will be on development strategy covering mainly entry mode and business environment assessment; collaborative culture including understanding of that culture, alliance with local firms, cross-cultural decision making and teamwork; and risk management for overseas activities that are considered as the prime concerns in the pre-contracting stage of the project life-cycle.

The reasons for prime concerns in these items are discussed in the previous sections of the literature review and summarized herewith for easy reference:-

- (a) Development strategy is critical as competitiveness is the prime concern of the survival and sustainable development of the firm. Different approaches to strategic view of entry mode and business environment assessment have to be closely examined to ensure the competitiveness and essence of the strategic issues are integrated and considered thoroughly by the construction firms. The local authorities may welcome foreign competition in the domestic market but the local regulations, economy and policies (fully committed, partially committed or not committed) may have significant influence to the competitiveness of the firm. Hence the existing studies in industry structure, entrance model, positioning, and market environment will provide a strategic view in the interaction among expectation, planning, implementation and practical operation results.
- (b) Collaborative culture of the strategic view is important since construction projects are local. Exportation of cross-national construction services has to cope with the majority of locally orientated value chain. When foreign enterprise entering the local market, it is crucial to build up collaborative culture with locals in the organization to ensure synergy effect. Further the blending of workforces and management staffs in any project is increasing regardless that con-

tractors are reluctant to let go any of their hard-won resources. Further increasing numbers of joint venture projects also lead the contractors to enhance collaborative culture.

- (c) Risk management covers nearly all management scope of the organization and it is to review the impact of risks to strategic responses for any contractor entering the global construction market. According to KPMG (2009), many firms have devoted time and resources in risk management. In their survey a vast majority (73%) of the survey respondents had strengthened their focus in risk management in the last 12 months. It is commonly understood that risk management is the key to strengthen the performance of the firm.

Even though all the other construction related issues including value chain, time span and other construction management related issues are also important, it is the pre-contracting stage of the project life-cycle that will be focused in this thesis. It is, therefore, important in the literature review to review approaches to strategy, collaborative culture and risk management in international business development. This will provide a general picture of the international business environment and the critical link to these three factors. Further the Hong Kong, China or Taiwan construction industries will be focused besides the other international markets. This is mainly because Hong Kong local construction firms are mostly owned and managed by Chinese and the corporate characteristics are similar.

2.4.1 International Business Development: Strategy

In the contemporary business environment, there are more and more firms engaged in international business ("IB"). Vernon (1966) is probably one of the pioneers discussing IB related matters i.e. the theory of movement of products and services overseas. In fact, IB issues are complex and influenced by a large variety of issues including competitive environments, political influence and

systems, legal, monetary, cultures, institutions, economic conditions, value systems and most important: people (Boddewyn, 1988; Grosse & Kujawa, 1988; Grosse & Behrman, 1992). Technical impact is a major element affecting IB (Davidson & McFetridge, 1985; Davis & Harveston, 2000; Peng, 2001). Other impacts including financial functional impact (Carpenter, et al. 2000; Beeson, 2003), competitive impact (Porter, 1985; Miller, 1992; Woo, 2002), environmental impact (Dreher & Ramada, 2006; Ahmed, et al., 2003), and strategic impacts (Hill, Hwang & Kim, 1990; Hamel, 1991; Sher, 2003) are major contributing factors to IB. All the above mentioned factors are parts of the strategic management issues that ensure the capability of the firms to achieve and sustain competitive advantages.

Firms may consider entering foreign markets simply by exportation from their home country, which is considered as the easiest and most common mode of entry. There are also a number of other options including setting up wholly owned subsidiaries, branch offices, project joint ventures, equity joint ventures or other means like cooperation agreements, MOU's etc. But the mode of entry has to be dependent on the capacity including resources and knowledge of the firm. However, firms expanding their business beyond their own countries imply that they are all walking in the world of the unknown. Johanson and Vahlne (1977) point out categorically that firms expanding overseas need to acquire knowledge about international operations through learning so as to reduce uncertainty and perceived risks. Barkema, Bell & Penning (1995) suggest retaining sustainable learning and accumulated knowledge until the learning effect can become institutionalized. However, in further studies by Forsgren (2002), Ribiere et al. (2004) and Schulte & Jackson (2007) it is noticed that internationalization knowledge growth is highly dependent upon individual acquisition of knowledge and is difficult to transfer to other individuals or through context.

Root (1978) put forward three basic questions for firms intending to expand to international markets:

1. Why go international?
2. How to compete with local firms who have apparent advantages in the local market?
3. What are the advantages of a foreign firm in the new market?

These questions lead to various approaches for foreign firms in considering IB development:-

- **Market Imperfection Approach** [*Ownership advantage theory*] suggested by Hymer (1960) and Kindleberger (1969) mainly emphasizes foreign direct investment ("FDI") possessing advantages that local competitors don't have; and market imperfections are the main cause for FDI. Colen et. al. (2008) reported that FDI has increased enormously with increasing mobility over the last thirty years. Such "footloose capital" tends to be moved in search of the *best obtainable return* (Mudambi, 1995). Hunt & Morgan (1995) pointed out that technology advantage is one the prime elements of FDI. Kehoe & Perri (2002) and Chen & Ku (2002) further suggested that financial facilities are prime tools of FDI to earn their advantage. Liu & Pang (2005), however, points out that risk factors are serious and critical to market imperfections.
- **Approaches (internalization theory) based on Firm-specific advantages** were first suggested by Coase (1937) in a hypothetical way and further developed by McManus (1972), Buckley & Casson (1976) and Ribiere et al. (2004). The latter emphasized that their approach is more systematic for multinational business activities and is industrial based, region-specific, nation-specific & firm specific whilst emphasizing product factors, cultural factors, political factors and management/technical knowledge respectively. They also stressed

- the importance of relationships with governments. It is worthy of note that Magee (1981) took a different route and developed the theory of information through redefining the theory of FDI of Buckley & Casson. The theory of information will encourage R&D and such key innovation will boost the size of a firm and subsequently have an influence on the structure of the industry. Birkinshaw, Hood & Jonsson (1998) examined the subsidiaries of multinational corporations ("MNC's") and emphasized the importance of leadership and organizational culture. Henisz (2003) further expanded this, in that effective cooperation with host governments provides MNC's with an advantage over their local partners. Taggart & McDermott (2003) concluded that theories developed focusing more on knowledge and the skill-based market and FDI is the more preferred strategy, based on the hypothesis that internalization costs are outweighed by benefits. Ribiere et al. (2004) has adhered to knowledge-based view of strategy and suggested that stronger predictions in performance within the industry could be achieved through firm-specific resources and capabilities.
- **An Approach based on location-specific advantages** was developed by Vernon (1966) and extended by Wells (1972). Their prime studies were to work out the determinants of FDI related to location variables. MNCs adopt various methodologies to break barriers in specific locations or diversify their operations to other low-cost locations to ensure profitability. Johanson & Vahlne (1977) later focused more on the knowledge of markets and operations of individual firms and on their location-specific advantages. Hood & Young (1979) further suggested that the theory should be pertinent to labour costs, marketing factors, trade barriers, and government policy which impacts on cost-advantages. Further studies by Ronstadt (1977) and Williams (1997) further indicated the importance of non-price competition in specific locations. A report of Dunning & Zhang (2008) suggests that location-specific advan-

tages include location-specific natural resources, man-made resources, low taxes, low wage costs, high labor productivity, or state-supported monopolies and can lead to sustainable competitive advantages.

- **Approaches based on Strategy Alliance** can be categorized into: alliance based on specific strategic target (Harrigan, 1988); alliance based on multi-purpose (Yoffie, 1996); alliance based on cooperation of technology (Hagedoorn, 1993); alliance based on corporate governance to minimize cost (Kogut, 1988); and alliance based on expanding operation scale and cost reduction (Contractor & Lorange, 2002). Alliance has many forms inclusive of contractual alliances, equity alliances, and joint ventures. Due to growing international competition, drastic technology changes, and globalization, Elmuti & Kathawala (2001) pointed out that firm alliances have grown in number rapidly, with firms seeking to spread risk and benefit from synergies. Barney & Hesterly (2006) suggested that strategic alliance will create added value to complementary as well as leverage existing resources and capabilities. In addition, it will also produce comparative or absolute competitive advantages to trades.
- **Resources based Approach** attracted attention when Barney (1986) raised it in his discussion of sustainable competitive advantage. Grant (1991) later suggested that firm strategy should be considered together with resources, competitiveness and profit. He also placed emphasis on the core competence of the firm. Peteraf (1993) concentrates more on the efficient handling of internal resources and its sustainable competitive advantages. Dhanaraj & Beamish (2003) focus on resources including firm size, organization and technology intensity. Resources related to various trades are being further studied in order to examine the influence of resource relationships on specific function and location (Luo, Sivakumar & Liu, 2005;

Hunt & Madhavaram, 2006, Dhanaraj & Beamish, 2003).

- **Conceptual Model of Contingencies** integrates environmental issues, the competitive intensity of the industry and the market situation into the study of entry approach in one comprehensive framework (Minor et al., 1991; Ahuja & Lampert, 2001). The firm's experience and strengths are taken into consideration. The model incorporates the firm's strategic objective and eventually determines on the goals and entry modes. El-Higzi (2001) points out that the firm's overall performance in the international market is resulted from the interplay of environmental, product, competition, and organizational factors of goals and entry mode choices. It is clear that the mode is a conclusive inclusion of the firm's strategic goals.

Based on the above theory studies and the review of MNC's establishment activities in foreign countries, they may choose to establish subsidiaries other than adopting an alliance approach. The MNCs will impose specific task(s) upon its subsidiary and develop it into a particular type of subsidiary that fit into its strategic requirements. Porter (1985) adopts corporate level strategy and Caves (1996) suggests 3 types of subsidiary control: vertical mode (subsidiary performs single task with one-link within the service/product value chain); portfolio diversified mode (manage growth and divestment opportunity as independent firm); and horizontal mode (at new location with own cost leadership, with differentiated or focused innovation product). However, contemporary Headquarter and subsidiary relationship mainly concerns unit independence, alliances, knowledge clusters, trust networks and network capitalism (Asakawa, 2001; Hewett, Roth & Roth 2003).

From a different perspective, classification of subsidiaries may be based on decision criteria including extent of market involvement vs. subsidiary autonomy (D'Cruz, 1986); market scope vs. product scope & value-added scope (White & Poynter, 1984); subsidiary

competence vs. strategic importance of local environment (Bartlett & Ghoshal, 1986); inflow and outflow of subsidiary knowledge (Gupta & Govindarajan, 1991); integration vs. localization (Jarillo & Martinez, 1990; Taggart, 1997a); procedural justice vs. subsidiary autonomy (Taggart 1997b); and multinational Firm strategy type vs. subsidiary capabilities (Hoffman, 1994). Despite the above mentioned diversified perspective, MNC's strategy on subsidiary control and coordination is intimately and reciprocally interrelated to HQ-subsidary relationships (Johnston, 2005). Harzing et al. (2010) concluded through their study to eight German and Japanese firms that language is practically one of the key barriers in HQ-subsidary relationship. The MNCs are able to enhance their competitiveness on a global scale only when they can recognize and implement improvement measures to the language barrier (Feely & Harzing, 2003). The use of bilingual staffs as the linking-pins and strengthened language training has been identified and strongly recommended by a number of studies (Marschan-piekkari et al., 1999; Feely & Harzing, 2003 and Vaara et al., 2005; Yoshihara et al., 2001).

When international business activities are considered, they are usually linked with FDI theory and related also to the firm-specified, location-specific and internalization theory (Dunning, 1973; 1977; 1988 & 2000). Dunning considered that it must be more profitable for an MNC to combine internalized advantages with specific factors contributed to or by a specific foreign country. Dunning's eclectic paradigm also identified the most relevant and quantifiable variables to reflect the ownership, location, internationalization and specific factors in the internationalization process of the MNC. Popham (1991) observed that strict balance shall be kept between firm-specified, location-specific and internalization advantages. However, Kojima, (1978) raised doubts to the Eclectic Theory as its build up was based on Western MNC experience up to the 1980's and the changes over time are in question. In addition, perfor-

mance focused strategic management theory might provide a better insight into competitive market and knowledge flow for IB development (Buckley & Casson, 2001; Madhok & Phene, 2001).

From a firm's management point of view, in general, the top management of a firm has to select strategically from the countries in the world and to decide which country or market segment to enter. In a study of 250 marketing publications, Cavusgil & Navin (1981) noticed that international marketing as a body of knowledge is falling behind other areas of marketing. This field had also been identified to be comparatively less interesting to the academics (Hampton & Van Gent, 1984) right up until the 1990's when international marketing became a hot topic (Paliwoda, 1999). However, El-Higzi (2001) & Kirca (2005) noticed that there is insufficient study of the international marketing activities of construction services. Hence further study of the construction industry market entry mode is a necessity.

In the past studies of services marketing, it is emphasized more in performance with long value chain rather than products which is more tangible (Bateson, 1977; Grönroos, 1984; Zeithmal et. al., 1996; Tsai & Wu, 2007). The construction process is a complex process with long value chain including different services providers, manufacturers, subcontractors, equipment, labours with various skill and management of the diversified construction activities. Studies (Bartlett & Ghoshal, 1991; El-Higzi, 2001; Schulte & Jackson, 2007) suggest that there is no single marketing strategy but rather an integration of various modes pending on the nature of construction services the firm is providing. Bartlett and Ghoshal (1991) in their "transnational solution", suggest strengthened response from both global integration and local responsiveness. Further expanded from transnational solution, Schulte & Jackson (2007) suggest a "globalocal" model of marketing strategy as the higher order of solution for international contractors. The "globalocal" model intends to provide a dynamic strategic bearing that

enhance the global integration/local responsiveness (GI-LR) framework according to the value chain throughout the project life-cycle. In particular for international construction services.

In the study of Ostler (1998), governments are the important players in sourcing construction activities overseas mainly through bilateral agreements or foreign aids. Other forms of market entry are mostly through foreign direct investment (Emadi-Coffin, 2002; Dunning & Zhang, 2008), project execution, licensing (Buckley et al., 1991), alliance with local partner(s) (Johanson & Vahlne, 1977; Shrader, 2001) and competitive tendering (El-Gamal, 1993). International contractors tend to consider entering new markets in different modes. However, it has to be noticed that each selected entry mode requires different levels of resources, technology, investment risk, cultural impact and strategic planning. It is, therefore, necessary to carry out further study of the international marketing activities of construction services.

2.4.2 International Business Development: Culture of Collaboration

During recent decades, there are increasing numbers of committed MNCs entering international markets. It is understood that there are 'foreign entry costs' involved even when MNC is targeting increased profits based on the firm's expertise (Das et al., 2007). Modes of entry blended with the firm's decision in the international marketing activities of the construction industry have been discussed in Section 2.3.1 above. However, once the strategy of entry is selected, it will be difficult for the firm to change as there will be impact in both time and cost (Root, 1987). Therefore selection of the entry mode is probably the most critical strategic decision for an MNC (Agarwal & Ramaswami, 1992). When they expand to the targeted overseas market, they have to adjust themselves to the local culture (Barkema, Bell & Pennings, 1996). Further when MNC chooses to be in alliance with local firm(s) in-

stead of engaging wholly owned subsidiary they should realize that they have to cope with both national and organizational cultural differences (Johanson & Vahlne, 1977).

Decision making is the centre of an organization (Simon, 1997); and choice of decisions is considered as a fundamental of human nature (Frankl, 1962; Seligman, 2002; Hammond & Arkes, 1986; Foley & Polanyi, 2006; Johnson, 2006). The entry mode decision usually involves a number of major considerations including level of control, resources, risks, licensing, technology input, responsibility and liability sharing; and this is further blended with other cultural concerns including language, tradition, local practices etc., for a firm intending to collaborate with local firm(s) in the market they targeted (Shrader, 2001; World Business Council for Sustainable Development, 2003). For small and medium sized firms to enter into collaboration with foreign alliances may be perceived as a key success factor; but associated problems, if not handled with care might prove to become a disincentive (Karagozoglu & Lindell, 1998; Chetty, 2003; Berra et al., 1995; Arku, 2002; Shaver & Flyer, 2001).

Collaboration between foreign and local firms will benefit their joint competition advantage in the target country (Porter, 1990; Makino & Delios, 1996) and thereby reduce cost and uncertainties (Aulakh, Kotabe, & Sahay, 1996; Buckley & Casson, 1996; Ford, 1998; Zhou, Shin & Reich, 2002). Further, resources committed by both parties will provide strategic flexibility in the fast growing market. Even though there is a risk of trust (Dodgson, 1993; Das & Teng, 1998; Dimmock, 2003; Jøsang & Presti, 2004), collaboration will allow firms to focus more on the selected core competence and strengthen the competitiveness of the alliance (Prahalad & Hamel, 1990; Howells, 1998; Momme, Moeller & Hvolby, 2000).

For a MNC the mode of entry is more concentrated in knowledge, relationship and resources; and problems generated usually are

collaboration related and could be overcome by experience (Lorenzen & Mahnke, 2002; Child & Faulkner, 1998; Kuemmerle, 1999; Patel & Vega, 1999; Schuman, 2006). It is noted that knowledge is not one-sided (Kuemmerle, 1998) and as suggested by Frost (2001) local knowledge inclusive of local economies, politics, cultures, business customs, local supply chain, local labour resources, infrastructure, and other factors required to conduct business in their countries is also a key asset to the foreign partner. The transfer of knowledge between allied firms could be either horizontal or vertical; and either can trigger knowledge transfer or upgrade as well as jointly build-up knowledge (von Hippel, 1988; Lundvall, 1988). The tool to ensure achievement of such knowledge innovation can only be collaboration through interaction of time, space and organization (DeSanctis & Gallupe, 1987; Grudin & Poltrock, 1997).

The collaboration of the two firms involves intercultural management that is an appropriate management pattern that an MNC adopts to fit into the culture in which they work (Hofstede, 1980 and Trompenaars, 1998). Intercultural management includes team management, leadership, corporate strategy, organizational structure, human resources management, knowledge management, corporate core values, communications and conflict resolution (Earley & Singh, 1995; Jacob, 2004). The key to success is intercultural management and requires individual managers to develop and ensure its implementation (Bartelt & Ghoshal, 1999).

Studies and findings mentioned above are the triggering elements of collaboration. Shepard (1965) is the earliest one in touching on the theory of collaboration where he suggested the most effective way to collaboration is through training and sharing. Later Schein (1992) described in his findings that problem-solving through learning becomes part of the organizational culture. Cultural collaboration is further developed to emphasize the importance of organizational learning through a need of trust and effective work-

ing relationships (Argyris & Schön, 1974, 1996; Knight, 2000; Levin & Cross, 2004; Senge, 1990; Torbert, 1981).

In building up a culture of collaboration from a practical approach, it is not simply a matter of an all-seeing, all-knowing management; as there is no “right way”, but rather, a long process of learning together with good and wise judgment by the leader (Kaner, 2006). The practical way to build up a culture of collaboration should adopt, but should not be limited to, making good sense (Weick, 1995; Bushe, 2006), learning from experience (Argyris & Schön, 1996), metaphors (Snowden, 2001; Morgan 1997; Denning, 2000; Hofstede, 2001), uncertainty approach (Isaacs, 1999; Folger, Poole & Stutman, 2001), sustainable team work (Elkington, 1998; Diamond, 2004) and build personal responsibility (Beyerlin, Freedman, McGee & Moran, 2003).

From a different perspective, building up a cultural of collaboration is building up a bank of social capital, relying upon the building of social trust and confidence that impacts on people's willingness to cooperate (Siegrist, Earle & Gutscher, 2003). Putnam (2000) defined social capital as the stored value that individuals have accumulated in their networks; and such networks will expand if one has confidence in the continuous participation of their network. Earle (2002) explained that social trust is between two persons whereas confidence is between a person and an organization and is based on experience or evidence. To build up trust between persons from conflicting parties is fundamentally based on risk management. “The best hope for resolving conflicts with an outcome which yields the greatest benefit to both parties is through dialogue” (McCarthy, 1997). The proficiency of dialogue also refers to language barrier as mentioned in Section 2.3.1. Campbell (2006) suggested that dialogue has to be with a high degree of transparency, disclosure and due process within a given time frame. When people can share values, confidence will be gained and thus social capital can be generated. Zubizarreta (2006) further sug-

gested “practical dialogue” for the development of collaborative culture and also several additional elements including: efficiency in work for all critical situations; address complicated issues in depth and with creativity; respect people as they are; and support shared understandings, practical breakthroughs and assign actions.

2.4.3 International Business Development: Risk Management

Risk is a term that has several interpretations. Skipper (1998) mentioned: “No universally accepted definition of risk exists. Risk is commonly used to refer to insured items, to causes of loss and to the chance of loss. Statisticians and economists associate risk with variability..... A situation is risky if a range of outcomes exists and the actual outcome is not known in advance.”

All organizations face various types of risks. Risk management is all about sensitiveness in identification of risk, assessing risk, making necessary decisions and managing risk (Bernstein, 1998; Rowley, 1989; Smith, 1999). Risk management is not something new. The Old Testament of the Bible tells us that the Egyptian Pharaoh stored corn to guard against periods of famine. It is obvious that risk management evolves and becomes more scientific over time (Vedpuriswar, 2003).

It is noted that von Neumann & Morgenstern (1944) are probably the earliest to incorporate risk and uncertainty formally into economic theory. There are different opinions in the definition of risk and uncertainty (Knight, 1921; Shackle, 1979; Davidson, 1991; Milliken, 1987; Williamson, 1989). In fact, the dividing line between risk and uncertainty is thin. The important issue is to collect and analyze information and deal with risk (uncertainty) efficiently to ensure losses are minimized and generate competitive advantages (Vedpuriswar, 2003).

From a simplified approach, it is appropriate to say that risk is something happening in the future that cannot be predicted accurately at the moment of concern because there is uncertainty (Giddens, 1999). Uncertainty can be represented by the range of possible outcomes and the probability of an outcome occurring (Olsson, 2002) as shown in Table 2.8.

Table 2.8 – Uncertainty Matrix

Range of possible outcomes	Probability of an outcome occurring	Environment for decision-making
Known	Known	Certainty
Known	Unknown	Risk
Unknown	Unknown	Uncertainty

It is difficult to identify all risks owing to its nature; but it is possible to identify risk to the extent practical and decide which risk to take or to transfer (Higuera et al., 1994; Parring, Poteshman & Weisbach, 2002; Simon, Houghton & Aquino, 2000). Risk management is a cyclical process inclusive of risk analysis (determine objective → identify risk → determine most important risks → identify control measures) and risk management (risk analysis → choose control measures → implement control measure → evaluate control measure → up-date risk analysis) (van Well-Stam et al., 2004). In order to perform risk analysis, there is a choice of quantitative or qualitative analysis for the intended objective(s) (Grunhn, 1991; Wong, 2003). The important characteristics of quantitative and qualitative analyses are summarized by van Well-Stam et al., (2004) in Table 2.9.

Table 2.9 – Qualitative and Quantitative Risk Analysis compared

Qualitative risk analysis	Quantitative risk analysis
<p><i>When to use</i></p> <ul style="list-style-type: none"> - for risk management purposes 	<p><i>When to use</i></p> <ul style="list-style-type: none"> - support estimate/schedule feasibility - support contingency items
<p><i>Advantages</i></p> <p>provides quick and clear picture of the risks</p>	<p><i>Advantages</i></p> <p>effect of the measures may be mapped out more easily</p>
<p><i>Disadvantages</i></p> <ul style="list-style-type: none"> - prioritization provides less information 	<p><i>Disadvantages</i></p> <ul style="list-style-type: none"> - analysis demands time and effort - outcomes not link with assumptions

Courtney, Kirkland & Viguerie (2001) suggested a framework for strategic planning to handle uncertainties for most deals when meeting the lowest level of risk, and identify scenarios when dealing with difficult uncertainties.

But in highly uncertain situations, conventional planning methods may not be appropriate. McGrath & MacMillan (1995) suggested discovery-driven planning methodology for these situations as his studies noted that firms either, do not have sufficient information, or conduct analysis and conciliate the results, or they have the right data and right assumptions available but failed to recognize the issue in the first place.

Since the primary objective of risk management is to facilitate value added investment, Amram & Kulatilaka (1999) argued that the conventional valuation tools cannot meet the risk assessment aim. They suggested the important issue is to reshape the executives' thinking and ultimately bring strategy and shareholder's value into harmony. Risk management usually over-emphasizes risk and does not put sufficient emphasis

on opportunity (Kähkönen, 2001). “Risk in itself is not bad; risk is essential to progress, and failure is often a key part of learning. But we must learn to balance the possible negative consequences of risk against the potential benefits of its associated opportunity (van Scoy, 1992).” Standard & Poor’s et al. (2004) recommended that identification and choice of tools to manage risk is important. Similarly, the understanding of opportunity and growth-related thinking is also important for the sustainable development of the enterprise. From the globalization or business development point of view, in depth risk analysis with different criteria set for the firm is important for the selection of countries as well as modes of entry (Anderson & Buvik, 2002; Koch, 2001).

2.4.4 International Construction Industry Business Development Review

The internationalization theories have drawn the attention of a lot of MNCs. In particular for the construction industry, which represents the oldest industry involved in international business, the study and analysis of MNCs’ performances is very helpful to the modern internationalization of the industry. Low (1991a & 1991b), Low & Rashid (1993), Crosthwaite (2000) and Low & Jiang (2004) have studied the strategies, marketing and economic development of the global construction industry. Further studies on competitive advantages of firm performances in various countries have impact in the global competitiveness of the country (Seymour, 1987, Crosthwaite, 2000, Morton, 2002, Ofori, 2000 and Oz, 2001).

Moavenzadeh & Hagopian (1984) suggest a four-stage model of entry where: Stage 1 foreign contractors undertook all construction works; then Stage 2 local firms acted as subcontractors to foreign contractors; then Stage 3 local contractors undertook some of the works; and Stage 4 local contractors export their skills and services overseas.

Through studies to the development of MNC's from developing countries, Ofori (1996) suggests a better argument whereby MNC's evolve their international processes by setting-up strategic alliances, then by forming joint ventures, and finally by setting-up subsidiaries reflecting the economic development of their country. In order to further study the situation of contractors' internationalization, it is important to study some of the advanced nations in the internationalization of their construction services.

Britain is one of the most active international, construction activity related countries. British construction firms have had strong internationalized activities since 1970 owing to the swelling of the oil price and their technical and financial strength (Seymour, 1987; Seymour, 1992; Harvey & Ashworth, 1997, Morton, 2002). Seymour (1987) concluded specifically that British contractors have superior technical knowledge, greater overseas operational experience, management expertise and good-will, all to their advantage. In the late 90's Crosthwaite (1998, 2000) opined that British firms preferred to compete in developed countries owing to their secure environments, both financial and political, which is the preferred option for shareholders. Another significant advantage in international competitiveness of British firms relates to their activities in mergers & acquisitions ("M&A") owing to the integration of service providers involved in Private Finance Initiatives ("PFI") (Morton, 2002).

From the study by Seymour (1987), suggested that licensing in international construction was not the best option, as most cases in his study indicated their entry was based on a project basis. Eventual licensing was only an outcome of maintaining a good impression of presence to local clients. However, Abdul Aziz (1995) argued that Seymour ignored the difference between the internationalization process of a construction firm which refers to the MNC's commitment of resources to foreign markets over time and internalization factors reflecting a management decision to inter-

nalize the control advantages of MNC's services in the foreign construction market.

The competitive and market-driven environment of Singapore encouraged contractors, for the sake of their survival and growth, to expand their construction activities overseas (The Straits Times, 22nd Jan., 1997). Cuervo & Low (2005) further studied and concluded that the protection of reputation and need in managing quality of services has become the critical issues of internationalization in construction. Cuervo & Low (2005) further argued that there is not only one theory of international production that can fully explain the path, stages or cycles taken by contractors in engaging in foreign construction activities.

Cuervo & Low (2003) indicated that the important advantages that Southeast Asian contractors possess also include information & technical knowledge, good reputation and management and organizational capability. However, great experience of international operations as identified by Seymour (1987) and Nachum (1999) was not identified for the Southeast Asian contractors because they are less established than the contractors from UK or other developed countries (Japan, USA & the like).

In the study of Chinese contractors working beyond their own country, it is noted that the studies of Taiwan focused mainly in working in Mainland China (Liu, 2001; Yao, 2002, Khan, et al. 2004). The studies relating to Mainland Chinese construction firms expanding overseas are becoming more popular (Low & Jiang, 2004; Sha, 2004; Cheah & Chew, 2005; Kvisgaard, 2006). The study of Hong Kong construction firms expanding their operations overseas is absent. There are recently more seminars and promotions on these topics including the HKIE International Project Management Conference 2007 and the Hong Kong TDC Services Promotion Mission to UAE & Saudi in 2006 & 2007.

Regarding risks in international construction management, there are a number of studies carried out. Olsson (2002) argued that firms in doing business in emerging markets will encounter different quantitative and qualitative risks and need to engage a variety of methods to manage risk that may be associated with cultural issues. Ling & Hoi (2006), in their studies of Singapore firms undertaking construction activities in India, pointed out the prime factor of cultural impact and difficulties in creating a collaborative culture.

For the Chinese construction industry, they also carried out exhaustive studies in risk management for overseas construction works (Wang, 1999; Mi, Zhu & Si, 2001; Zhai, 2006). Their focus is more on the contractual and financial issues rather than cultural-related risks. The author believes that is because Mainland Chinese are not familiar with international contractual and financial application in overseas construction activities. The reason of such focusing needs to be further studied and, as Hong Kong contractors are familiar with international contractual and financial requirements, this shall not be discussed in this thesis.

Globalization of the contemporary construction industry has a significant influence to all the contractors operating in the industry. In the literature review, we have identified the key influence of globalization and the scope of the construction industry to which this thesis refers.

The influence of globalization to construction industry covers a wide range of, but not limited to, technical, management, strategic, financial and social aspects to the performance of the contractors. The study of these aspects, project based, can as well be divided into five stages as per the suggestion of Schulte & Jackson (2007). Based on the intention of this thesis, the research should not spread to studies in wide range. Hence, it is important to focus study in the pre-contracting phase of the project life-cycle as this

stage is probably considered a critical time span for the international contractors to consider their strategic responses in order to enhance their competitiveness in multinational construction markets.

It is further noticed that there are insufficient studies of the strategic responses of construction services in the pre-contracting phase of the project life-cycle. Hence this thesis is intending to carry out a structured study in this area to enhance the understanding and knowledge of the performance, in particular their strategic responses, of the international contractors in the pre-contracting phase of the project life-cycle.

2.5 Review and Comparison of other Overseas Construction Business Development Models

Wells (1977, 1980 & 1984) argued that developed countries' investments tend to be targeted on the under-developed countries, and particularly on those countries where they needed to acquire specific technology. The foreign enterprises very soon found out that the local companies will leave them behind once they have learned the necessary technology or experience. Wells (1970 & 1973) argued that the joint venture is also a way to establish long-term relationships with local firms even though the mechanism of the joint venture may be different from those in developed countries. Agrawal (1981) also found that Indian investors formed joint ventures owing to the Indian government's insistence that they comply with all technical and financial requirements in prequalification or tender documentation. In fact, Lecraw (1981) has also observed a similar effect in the Asean region. Ting & Schives (1981) carried out studies on two Taiwanese companies and found that they are able to gain a competitive edge in foreign markets by adopting amendments to their own technologies. Actually, it is interesting to note that Hong Kong, Korean and Taiwanese manufacturers (Chen, 1981; Jo, 1981, Ting & Schives, 1981) are all seeking different entry modes that

can most benefit their own advantages in competition.

Monye (1996) argued that technology is, perhaps, the most desirable attribute of multinational enterprises for the less developed countries and this comprises their primary source of bargaining power. In the construction industry, this argument may be debatable because of the special characteristics of the construction industry where technology may be important for the high-end construction projects but not crucial in conventional construction works inclusive of building and infrastructure works. Another important consideration is the firm size and its location-specific advantages. Chung (2001) and Nachum & Wymbs (2002) argued that location advantages are associated with the firm's capacity and may affect the choice of entry mode.

Through the above discussions, it is noted that international entrepreneurs have various and different modes of entry into their chosen global markets. Hence it is interesting to study the variations in entry modes of the international contractors working in international construction markets. In the surveys conducted by the author in 2004 and 2008, it is observed that Hong Kong contractors have only just commenced their overseas construction business development. Yet the developed countries contractors including but not limited to those coming from Europe, USA and Japan have commenced their overseas business development for many decades. It will be interesting to investigate and find out the different entry modes of their overseas construction business development.

2.5.1 A German contractor expanding its' international construction business

The author carried out a brief study of a German contractor working overseas i.e. Bilfinger + Berger Bauaktiengesellschaft, now renamed Bilfinger Berger AG (hereinafter termed as 'BBAG'). BBAG started in business in 1880 in Germany and is considered as one of the oldest contractors in Europe. In ENR (2008), it is

noted that BBAG was listed 19th in the Top 225 Global contractors (total company revenue orientated) and listed 9th in the Top 225 International contractors (international revenue other than home country orientated). This indicates that BBAG remains as one of the largest contractors in terms of global turnover as well as in overseas turnover. Their 128 years, up to 2008, of operations has made them a successful construction firm that operates in domestic as well as in overseas markets. BBAG has multi-technical strength.

The following ENR top 20 ranking table for 2008 shows BBAG's strength in various areas:-

Sector	ENR ranking
Sewerage and Solid Waste	10
General Building	12
Industrial Process	1
Power	10
Transportation	5

Kupfer (1980) reported that BBAG started in business in 1880 and achieved successful development in Germany. Based on sound successful domestic business, they expanded their business to countries outside Europe in the early 1900's. They found their first steps of overseas expansion were loaded with great risks and serious difficulties. They have expanded their overseas business to all the continents; and their construction activities cover all areas including all types of building works, bridge construction, tunnel works, refineries, power stations & hydro-power plants, sewage treatment plants, reclamations, port-works, and special infrastructure works. They amassed a lot of valuable experience and confidence through their operations and gained necessary knowledge and know-how over a hundred years covering the following aspects:-

- financial risk due to changes of locations in overseas business;

- cost factor differences due to variations from country to country;
- taxation, customs, administrative conditions, unionization, policies of various countries differing, requiring regular monitoring and review;
- culture, climate, people & traditional differences;
- foreign exchange risk based on the global economic situation; and
- distance communication & coordination affecting management decisions.

BBAG believes strongly in the utilization of human resources. They emphasized that accommodation and amenities including medication and education that European managers and their families are used to must be provided. Hence they understood that a disproportionately higher expenditure in terms of time and money is needed when compared with projects executed at home. They also recognized the sudden occurrences of critical bottlenecks due to economic changes in some developing countries. BBAG adopts a flexible approach to handle such situations. Their prime strategic solution is to provide an entire range of services inclusive of advance planning, design and execution for their overseas operations. Another key factor is their high degree of confidence in the country they entered regarding their reliability, credibility and capabilities, inclusive of their clients and partnering contractors.

In any case, it is noted that their prime factors of success lie with technical and organizational efforts. Their mode of entry is the result of a combined analysis of the particular market, critical location issues and at the same time retaining a company-specific approach. Their over a hundred years experience in overseas business development is considered as 'golden advice' to new-

comers.

2.5.2 Review of contractors from developed countries in their overseas construction business development

Construction business is always considered as a local business because the end products are to be built regionally or, to be more precise, locally. Most construction firms are structured to execute contracts in their local markets and from time to time expand to nearby regions. International construction business actually means that the construction firm is committed to international sales for their construction services. These international contractors have to have broad knowledge of economic, social, cultural and geographical matters in respect of the targeted country. The understanding of the internationalization of the construction industry should be based on the knowledge, experience and track records of contractors who have executed projects in various international markets. In contemporary history, there are many contractors like BBAG from developed countries including USA, European Community, Japan, Australia etc. who have initiated their overseas business development many decades earlier.

The following sections shall review several developed countries and their contractors performing international construction business development.

2.5.2.1 Germany

It is noted that German contractors are one of the strongest international contracting groups. In 1999, they won approximately 10.5% of the total international construction revenue and were listed 4th, after USA, Britain and France, as the largest international construction services providers even though the total number of German contractors listed in the 1999 ENR Top 225 International Contractors is only 12. German con-

tractors have somehow maintained their international construction revenue of 10.3% of the total international construction revenue with only 5 contractors listed in the 2007 ENR Top 225 International Contractors. Trailing just behind USA and France, they have become the 3rd largest country performing international construction business. It seems obvious that German contractors are strong and competitive in the international construction marketplace.

It is noted from Section 8.2 of this paper that German contractors commenced overseas business development in the early 20th century. They are probably one of the earliest contemporary construction contracting groups to initiate expansion of their business to international markets. However, most of the papers are in the German language, presenting a barrier to in-depth understanding of the German contractors' globalization experience. Hence, only a limited number of English texts are able to be reviewed.

Reizner (2008) argues that the examination of the foreign market is usually separated into two phases i.e. a preliminary examination of the foreign market and then a main analysis of the selected market. He contends that construction people focused more on international marketing management and are much less focused on market research and strategic marketing. Such a phenomenon has become more apparent since being highlighted by Wirtschaftsvereinigung Bauindustrie e.V. Nordrhein-Westfalen at their conference "Constructing abroad" in 1976. He also reported that IFO-Institut für Wirtschaftsforschung, Munich, carried out a study "Report on the German construction industry" and found the international construction contractors have two alternative market entry modes:-

- a. exporting construction services (traditional international contracting); and

- b. direct investment with overseas construction contractors by establishing (i) branch offices/subsidiaries; or (ii) equity joint venture companies.

In fact, Siehler (1999) argued that German contractors maintained their long term expansion of their own resources and retained their competitive position and took advantage of the opportunities of the East Germany market boom. Eventually they achieved remarkable growth. Together with the integration of necessary acquisitions, German contractors reached the top positions in international construction markets.

2.5.2.2 Hong Kong

In 1998, Hong Kong construction reached its peak (refer to Fig. 1.1). Apart from the serious impact of the Asian financial crisis, Hong Kong construction industry was also facing major issues including insufficient investment, research, development and training. Tang (2001) recommended 93 points for the Hong Kong construction industry to improve its performance. Through Tang's recommendations, Hong Kong construction industry has made a great effort to improve its performance. Yet the Hong Kong construction industry experienced one of its most serious contractions in both output and orders between 1998 and 2006. Thorpe & McCaffer (1991) have argued that "deep decline in output and order in the industry, as a consequence of recession, has resulted in escalation of competition combined with record levels of corporate collapse in the industry". Further, Chiang, Tang & Leung (2001) pointed out that HK building contractors compete intensively on cost reduction but not in technology improvement and cannot compete with international contractors. Chiang concluded that HK government has not assumed an active role to promote overall competitiveness of local contractors. Actually, there are a number of international contractors who pulled out of the Hong

Kong market (but with their qualification retained in Hong Kong) and also a number of Hong Kong contractors are facing difficulties in their operation. The author takes a different view and reviewed the performance of Hong Kong major contractors. The author noticed that Hong Kong local contractors are able to survive even with a smaller margin as they are more familiar with the local market environment; and hence they are able to compete with international contractors in the Hong Kong construction market.

It is noted that Paul Y-ITC Construction Holdings Ltd. has acquired Downer Group Limited in 1994 and Downer was later sold in Dec., 2004. In fact, Paul Y-ITC made it to the "ENR top 225 International contractors" between 2000 and 2005 mainly due to Downer's operations being focused in New Zealand and Australia together with works in other Asian countries. According to the view of Chiang (2002) the other Hong Kong contractors are small. It seems that there is limited research being carried out on the Hong Kong construction industry expanding operations overseas. Cheong & Baldwin (2006) actually reported that China State Construction Engineering (HK) Ltd. ("CSCHK") has expanded their overseas business to Dubai and India. In particular, Cheong (2008) reported that CSCHK used its own resources, not acquisitions, to expand their business to India and UAE. Other than CSCHK, other Hong Kong contractors are expanding their overseas business only from 2007 onward as discussed in Section 4.5.4.

In the study by Wong et al. (2006), they critically pointed out that leadership styles between local and British managers have similar perspectives in communication, conflict resolution and power relationships. However, they display major differences where power relationship with subordinates is concerned. This is mainly due to the deep-rooted differences in cultural

values and beliefs. This seems insignificant in the Hong Kong construction market; but through the studies of this paper, this is considered as a critical issue where overseas construction business development is concerned.

2.5.2.3 Singapore

Singapore experienced a boom in exported construction services from the early 80's to the late 90's (Chan, 1999). There are a number of studies of the overseas construction business development for Singaporean contractors. A study by Wong & Foo (1995) indicated that technology may be the key to overseas development success. Cuervo & Pheng (2003) argued that Singaporean contractors executed their overseas development in Southeast Asian countries based on the government's attitude, policies & regulations, social, political, cultural, geography and cost factors. However, their overseas activities are also dependent upon their company-specific approach where they examine the size, international exposure, age and specialties as the main elements. Pheng et al. (2004) also critically pointed out that a lot of Singaporean contractors are expanding their overseas business depending upon their strategies, market situation and also historic factors.

Cuervo & Pheng (2002) argued that the non-Singaporean contractors reckon that their critical importance arises from:

- (1) their firm's name and reputation;
- (2) human resource management capabilities; and
- (3) business development capabilities.

Yet the Singaporean contractors believe that their most important advantages arise from:

- (1) information, knowledge, technology and R&D capability;

- (2) firm's name and reputation; and
- (3) management and organizational capability.

Cuervo & Low (2003) has pointed out that the difference mainly arises because of the comparatively more recent engagement of Singaporean contractors in the international construction business and also probably due to their smaller size and operations.

The Singapore government is encouraging local contractors to overseas venture, Teo et al. (2007) argued that Singaporean contractors can only survive by enhancing their operations overseas through alliance with the assistance of target country government. From the risk prospective, Ling & Hoi (2006) opined that overseas works, particularly in India, should include sufficient contingencies through insurance and that projects should be executed with careful planning and good management. They specifically pointed out that flexibility and patience is of the utmost importance when dealing with cultural impacts.

2.5.2.4 China

It is noted that there were only limited numbers of Mainland Chinese contractors working in the international market before 1980. Their works are mostly government funded projects mainly In Middle East and Africa. After China opened and commenced their "go overseas" strategy, there are 51 Mainland Chinese contractors listed in the ENR (2008) Top 225 International contractors. These overseas activities cover construction, engineering and labour services according to MOFTEC, i.e. Ministry of Foreign Trade and Economic Cooperation of P.R. China, categorization. Zhao (2001) & Xing (2001) reported that Chinese contractors engaged in a wide

range of infrastructure and building construction projects and also brought along the export of equipment and materials.

In the Mainland Chinese contractors' route of development to overseas, they recognized they are heavily controlled by ineffective government procedures (Zhao & Hu, 2001) and insufficient professional services from the industry agencies (China Building Industry Year Book, 1998). It is noticed that China is lacking international project management experience (Huo, 2000). It is also noticed that Chinese contractors are not having sufficient financial capacity for their overseas business development (Zhao, 2001; Xing 2001). Walker et al. (1998), Xiao (2000) and Lu (2002) critically pointed out that the state owned construction enterprises have problems with the authority of management against ownership rights; and they prioritized on turnover, i.e. price-based, orientated competition for overseas projects, causing significant losses for their owner as well as the state. Hence the Chinese government promoted the formation of project-based joint ventures or other types of alliances with other international contractors (Li, 2001).

Cheah & Chew (2005) studied two Mainland Chinese contractors and noticed that there is no hard and fast rule in developing a reasonable strategy which indicated that China's development is evolving on a fast track. Chen et.al. (2007) argued that Chinese contractors entered the Africa market which is their most successful overseas market in an ad hoc manner, without formal strategic plan or long term commitment. The Chinese government involvement seems to be critical to the successful entry to the market by Chinese contractors.

It is noted that after China's entry to the WTO, the companies' performance and industrial structure have improved (Huang et al., 2000). It is noted that Mainland Chinese international contractors have made significant progress in building up their

competitiveness; but Zhao & Shen (2008) argued that Chinese contractors need to improve the capacity of their resources, including both financial and human resources, in order to obtain sufficient experience and competitiveness to penetrate the international construction markets.

It is noted that Mainland Chinese contractors are aggressively developing their overseas construction business. However, the development is hindered by resources as well as experience in contract management. Studies (Zhao & Shen, 2008; Chen & Mohamed, 2002; Pheng et al. 2004) suggested that Chinese contractors should work in alliance with international contractors in order to gain sufficient advantage in international construction market competition.

2.5.2.5 UK

It is noted that British contractors are one of the strongest global construction players. In 1999, they won approximately 11.7% of the total international construction revenue, were listed 3rd; after USA and France, largest international construction services provider. However, as time passed by, British contractors have dropped back in their global construction development. In 2007, their total international construction revenue was only 3.6% of the total international construction revenue. They are falling behind USA, French, Germany, Italy, Spain, Japan & China. However, in reviewing the international revenue of each UK international contractor in 2007, it is noted that their average revenue is 2,800million USD and is considered the 4th highest after France, Germany and Holland. Hence, UK international contractors are still strong and competitive in the international construction market.

Seymour (1987) showed that UK-based international contractors believe their advantages to be in four areas including;

- (1) technical knowledge;
- (2) rich experience in overseas operations;
- (3) management expertise; and
- (4) good reputation.

However, when reviewing the rise and fall of the British contractors including AMEC, Costain and Kvaerner, Siehler (1999) critically pointed out that strategy plays a very critical role; and he appraised the Mintzberg's (1994) model based on the rise and fall of strategic planning. The importance of strong strategic planning is also supported by Mutti & Flanagan (2008). Siehler noticed that the key success factor of UK international contractors in their strategic planning is from the emphasis on profitability rather than turnover.

In the study of Pheng et al. (2004), they have argued that the strength of UK contractors comes mainly from internationalization and specialty advantages; but their weakness lies more in their apparent lack of resources as indicated by Quant (2007) whereby UK imported around 650,000 workers for the construction industry in 2007. Hence the recommendation of Pheng et al. (2004) to ally with Chinese or other contractors remains valid.

2.5.2.6 USA

USA contractors are very active and have remained on the top of all nations in the international construction market even though their number of firms on the ENR Top 225 International Contractors dropped from 74 firms in 1999 to 35 firms in 2007 and the percentage of international revenue dropped from 24.1% to 13.8% respectively. But the total revenue amount has increased by 50% from 28,655 million USD in 1999 to

42,735 million USD in 2007. Arditi & Gutierrez (1991) argued that the performance of US contractors is affected by location, type of work, type of financing and type of contracts. Murray & Appiah-Baiden (2000) reviewed contractors from the developing world and argued that they need to develop their international exposure even though they are increasingly dominating the international construction market. They suggested that forming alliances with emerging and developing contractors is probably the best option for competition.

Grün (2004) & Hofstede (2004) have found that the performance of US and large European construction companies in mega-projects are similarly very good. It is noted that whilst price may still be the dominating factor of the construction industry, the management measures, more efficient and costly construction methods may be the best options available to the contractors.

US National Research Council (1988) has critically pointed out that for US construction companies to retain their superior position in the international construction market, this 'could be a dream'. It mentioned that US foreign policy as well as their Foreign Corrupt Practices Act ("FCPA") has, to a certain degree, restricted the US firms from working in some countries and prevented them from conforming to local practices and customs. Double taxation is another problem that US contractors have also faced. Even though the report reckons that US companies are still leading in process plants, power stations, petroleum and petrochemical industry, the authors worry that the US is still slower than many other nations in developing national trade and economic policies to support the US construction industry in competing in international construction markets.

2.6 Summary

From the construction industry globalization view point, the period since 1990 was the golden period with the markets opening up in Eastern Europe, East & Southeast Asia. Only when the financial crisis impacted the world, more severely in East & Southeast Asia, in 1998, the construction globalization started to recede.

The following table 2.10 shows the number of firms of major countries listed in the Top 225 International contractors in ENR (2000 & 2008) respectively. The following Table 2.11 shows the global market share of major countries listed in Top 225 International Contractors in 2000 & 2008 respectively.

Table 2.10 No. of Firms of Major countries

	1999 No. Firms	2007 No of Firms
USA	74 (33%)	35 (15.6%)
British	6 (2.7%)	4 (1.8%)
German	12 (5.3%)	5 (2.2%)
French	9 (4%)	5 (2.2%)
Japan	18 (8%)	16 (7%)
Korea	7 (3%)	11 (5%)
China	33 (15%)	51 (22.7%)

Table 2.11 Global Market Share of contractors from Major countries

	1999 Market share in M USD	2007 Market share in M USD
USA	28,655 (24.1%)	42,735 (13.8%)
British	13,908 (11.7%)	11,310 (3.6%)
German	12,455 (10.5%)	32,088 (10.3%)
French	15,619(13.2%)	38,694 (12.5%)
Japan	11,550 (9.7%)	23,859 (7.7%)
Korea	2,777 (2.3%)	8,015 (2.6%)
China	6,099 (5.1%)	22,678 (7.3%)

From the information provided in the above tables (Table 2.10 & 2.11), it is noted that US and some traditionally strong western nations have slowed down in their international construction business; and that China together with some other nations, on the contrary, have picked up a lot. Nachum (1999) argued that greater experience in international operations may not be the obvious reason for ownership advantages for western companies. Cuervo & Pheng (2003) has also pointed out that developing nation contractors are less worried than the developed countries contractors in handling protectionism. In fact, contractors from large developed countries have good reputations based on their world market share but such market share can be either location specific or specialized segment orientated. International contractors are competing in various parts of the world and seek to develop their construction business either based on their firm-specific advantage or location-specific advantage or resources advantage or alliance advantage. These may be part of the reason why construction companies are able to develop themselves to become competitive in the international construction market. But according to Dikmen et al. (2005), 'many construction companies are underestimating the importance of marketing knowledge as well as their marketing orientation'. This could be the reason why a lot of international contractors have dropped out of the international construction market. In consideration of the comment, the definition of "international contractor" should adapt the justification used by Financial Times (1997) in their "global company survey":- *A global company operates, or actively aspires to operate on a global scale. It thinks and acts in terms of world market share, not just local or regional penetration.* Hence any construction company from any country that can effectively operate and remain active in the international construction market can be considered as an "international contractor". The international contractors have to review their international business development strategies from time to time so that the advantages of their international market knowledge can be integrated with the firm's other advantages. Such rolling revision of international construction company's development strategy will be of prime importance for international

contractors to remain active in the international construction market as well as retaining effectiveness in their international operations.

For the purpose of this thesis, we have, through literature review, defined the construction business as having the same activities as the construction industry in an internationally accepted standard as detailed in Table 2.1 and the contractors as the firms that execute the construction activities as indicated in Table 2.1. It is evident that there are large number of researches and studies carried out in specific areas of the construction industry to explore the competitiveness and risks/opportunities to improve the performance of implementation of construction industry.

Each nation's construction market forms a part of the international construction market, which is a multi-trillion USD market. Each nation's construction sector is contributes significantly to their national GDP and makes the construction sector a major economic pillar in the nation. The international construction market is a very large market and the supply chain related to this market is extensive where some are directly linked including cement, steel, aggregate and others are indirectly linked including logistic, information technology & communication services, financing/banking services, legal services and others.

Obviously the market size of each nation is changing with the economic growth and development of the nation. Based on this prospective, the construction market of each nation is also changing from pure construction contracts to private public participating contracts that integrate more sectors in the value chain. Due to such a large and diversified market, corruption is often observed in the construction sector. Government and private sectors are working together to fight against it.

Competitiveness is the most crucial factor for the survival of a company. The contractor has to maintain its competitive advantage in the drastic changing environment related to the construction market. Porter (1980, 1985 & 1990) suggests the Five Forces model to assess and analyze

the competitiveness of an organization. These five forces include competitive rivalry, market entry barrier, supply power, purchasing power and alternative selections. This model is often used along with SWOT and PEST analysis. Further Downes & Mui (1998) suggest three additional forces including globalization, digitalization and deregulation.

These major competitiveness characteristics can be identified in different terminology (Bradford & Duncan, 1999) including micro-environment, macro-environment and internal environment where the components can be more easily determined. Macro-environment mainly includes environmental components relate to macro-economy and micro-environment mainly includes environmental components relate to construction projects. Internal environment mainly includes core capacity of the company and its related value chain. This thesis adopts the terminology suggested by Bradford & Duncan (1999) and blended with explanation of Porter, Downes & Mui and others.

The components of competitiveness are frequently studied because new components emerge with the progress of time. Casson (1982) and Oman (1984) studied multinational firms' activities whilst Downes & Mui (1998) has mentioned globalization that covers the processes of multinational operations. In construction industry, it is quite clear that several major activities are critical in the construction industry if the development of strategy particularly going along with collaborative culture of strategy and risk management. It is also important to acknowledge that value chain, time and other related management issues are going along as well.

From the international construction strategic planning point of view, Root (1978) raises the question on why and how to go international together with another crucial question on what are the advantages of the firm. In the literature review, it is noted that there are many approaches including market imperfection approach, firm-specific approach, location-specific approach, strategic alliance approach, resources based approach, conceptual model of contingency approach, and others. These ap-

proaches usually do not stand alone and may be adopted in conjunction with each other. However reading through the lines of the approaches, it is important to align the external environmental scanning with the internal environmental scanning to ensure the best competitive advantages are obtained.

When reviewing the culture of collaboration, the literature review identified that many scholars consider cultural collaboration as one of the most important components of international business development. This is because it can hardly be quantified, reviewed, assessed or analyzed in any phase of the pre-contracting stage or during the operating stage. This has to be borne in mind by all management: the culture of collaboration is a crucial deeply buried factor for international business development.

Risk management is also important as there are risks that can be quantified and there are also risks that cannot be quantified. The critical consideration of risk management is that risks must be able to identify, assess, evaluate and mitigate. In another words, risk must be identified and kept within a defined controllable level of the company.

When reviewing the experience of various international companies that have construction globalization experience, it is noted that all these companies have come through tough experience in international expansion. The final outcome of international business development is bringing them with more profit. But it has to be recognized that they also have experienced painful lessons. The reason for expanding their business overseas may be different but their competitiveness and strategic planning for expansion are all carefully chosen. Some of international contractors that have long overseas experience do not appear to take regards of so many details. This is because they have already experienced a lot and they have the necessary procedures to ensure the risks are kept within a controllable level. Their specific attention is focused only in limited external environmental items.

However, it is also observed that international construction business development for new comers, it is important they have to have sufficient study in the width and depth of the external environment and compare with the core capacity of the organization and then decide their own overseas development strategic planning. One must particularly notice for the strategic planning that environment is changing in respect of time. Hence time is an essential factor to any strategic planning in overseas construction business development.

3. Research Design and Methodology

3.1 Introduction

Ghebremedhin and Tweeten, (1994), point out that "research is applying the scientific method to study hypothetical propositions of presumed relations among phenomena." Hence, research is derived from three major perspectives (i) scientific method, (ii) hypothetical propositions of presumed relations and (iii) phenomena. Valid research should be scientifically testable, feasible, logical and have practical and academic implications (Yiu, 2009). OECD (1993) defines research as a systematic and organized way to increase the stock of knowledge. Valid research therefore requires design and appropriate methodology.

Methodology, as pointed out by Spirkin (1983), is a system of theories, principles and general tools in organizing and structuring theoretical and practical activities. The validity of methodology depends upon selected methods, thorough thinking, comprehension of science, appropriate research subject, relevant writing and persuasive interpretation (Ethridge, 2004) to provide a picture to a diversified properties, connections and events through organized theories or principles by means of regulated techniques blended with practical and theoretical understanding of reality. The target is to find out the truth and the correct, rational solution of problems (Spirkin, 1983).

Based on the above mentioned terminology of "research" and "methodology", the aim and objectives of the research formulated from the research questions were developed and designed to reflect the research areas. The research questions, research aim and research objectives of this thesis are outlined in Section 1.1 to 1.3 respectively. These were formulated to investigate an unresolved area of the construction industry concerning the difference between theory, methodology and practice in the pre-contracting stage of a project life-cycle.

The research methodology of this thesis is based on the research process model suggested by Sekaran (1992) and Walker (1997). This includes a literature review, structured interviews (through surveys of preset questionnaires), and case studies. This chapter, Research Design and Methodology:

1. discusses the research philosophy inclusive of choice of research approach;
2. reviews the research strategy including the methodological approaches;
3. introduces the research instruments adopted;
4. explains the collection and analysis of the data;
5. analyzes the methodological problems and their solutions or effects; and
6. summarizes how the methodology directs the focus of the research

First it is necessary to consider the research approach.

3.2 Research Approach

Research is widely recognized as a method to gather knowledge commencing with Plato, Aristotle, Sophists and etc. in Ancient Greece. These famous scholars raised many questions that we now consider to be the basis of scientific or philosophical thinking. During the years of development, scholars developed reasoning powers whilst focusing on difficult, abstract, and puzzled questions. The studies of these questions led to various theories and methodologies to enhance value of imagination and thinking. Aristotle debates in his “golden mean” the balance or mixtures of extremes whilst Plato debates the singular or universal approaches to viewing the world (quantitative research) and Sophists debates plural or relative truths (qualitative research) (Johnson et al., 2007). The debates of these and other philosophers have di-

rected how people view, seek, find, believe, and justify knowledge since the times of ancient Greece.

In accordance with Aristotle, research is the consideration of an event through a well trained mind to explore the result and review the influence of the result (Stanford, 2008). According to Oxford Dictionary (1966), the word “research” is defined as “examine thoroughly” or “art of searching closely and carefully” in the 16th century and first applied to science in 1639 as “scientific inquiry” (Godin, 2001). This definition extends to include those of modern business institutions. The OECD (2001) defines “research” as the creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of humanity, culture and society, and the use of this stock of knowledge to devise new applications. Research is often assumed as scientific research. Yet, Churchman & Ackoff (1950) argued that science is inquiry (research), but not all inquiry (research) is scientific.

3.2.1 Philosophical Consideration

According to Webster’s Dictionary (2010), the meaning of philosophy is the search for wisdom and knowledge. Philosophy is the study of questions relating to and including existence, knowledge, values, reason, mind, and language. Philosophy has been developed based on the geography and culture of the region or country. In general, ‘Western Philosophy’ can be generally divided into several categories based on periods of time: Ancient Philosophy, Medieval Philosophy, Modern Philosophy and Contemporary Philosophy. The Eastern Philosophy can be categorized to Chinese Philosophy, Indian Philosophy, Babylonian Philosophy, Persian Philosophy and Religious Philosophy including Buddhist Philosophy. There is also Abrahamic Philosophy that includes Christian Philosophy, Jewish Philosophy, Islamic Philosophy and African Philosophy. There are numerous questions and most fundamental questions people has been asking. These questions lead to some overlapping *branches* of the philosophy in-

cluding logic, epistemology (nature and limit of knowledge), metaphysics (existence), ethics (ethical value), aesthetics (artistic), philosophy of language (communication accuracy), political philosophy (power and justification) and others.

Fitzgerald & Howcroft (1998) state that all research approaches hold to three major levels including ontological, epistemological, and methodological level. In general, these philosophical standpoints are presented in polarized or contrasted positions that are usually described as realist vs. relativist; hard vs. soft; objective vs. subjective; quantitative vs. qualitative; positivist vs. interpretivist; theory vs. empirical and others. Construction management research is also captured among these diversified philosophical approaches (Toole, 2006; Ahadzie et al.; 2008; Graham & Thomas, 2008; Backlund, 2005; Fitzgerald & Howcroft, 1998; Raftery et al., 1997; Seymour et al., 1997; Runeson, 1997). However it is noted that sources of literature specifically on construction research approaches are limited. (Here, it is noted that the journal *Construction Management and Economics* has made an important contribution to this subject.) The argument of Fitzgerald & Howcroft (1998), based on their debates on social sciences, conclusively indicated the positions of two diversified groups and eliminated many unnecessary branches and arguments. However, they note that some of the scholars from either inside or outside of the construction management field have other views that may become complementary than competitive.

The study of research consideration of this thesis mainly follows the research approaches described by Fitzgerald & Howcroft (1998). To their approach has been added the 'action research' approach.

3.2.1.1 Ontology

Ontology developed from metaphysical philosophy starting from Aristotle (384 BC – 322 BC). It is considered as the top level in the framework model of Fitzgerald & Howcroft (1998). It is the study of objects and their ties. Smith (2003) points out that ontology provides criteria for distinguishing various types of objects (solid and abstract, exist and non-exist, real and ideal, independent and dependent) and their ties (relationship, dependency and predication). Jaquette (2002) has critically pointed out that ontology has four established meanings in philosophy:-

■ Pure Philosophical Ontology

- Disciplinary, ontology is a method of enquiry into philosophical problems about existence.
- As domain, ontology is the result of ontology as a discipline.

■ Applied Scientific Ontology

- In applied scientific ontology, it is construed as an existence domain that can be subdivided theoretically to a preferred choice of existent entities, or to the real existent entities, including the actual world considered as a whole, also known as the extant domain.
- Ontology, as the extant domain, is the actual world of all real existent entities, whatever these turn out to be, identified by a true complete applied ontological theory.

Ontology has four established meanings in philosophy with pure different implications. Hence ontology should be qualified carefully to ensure the extended sense of the terminology is identified.

The critique of ontology is the debate between realism and relativism (Gergen, 2001; Nightingale & Cromby, 2002). According to (Cromby & Nightingale (1999): "Realism is the doctrine that an external world exists independently of our representations of it. Representations include perceptions, thoughts, language, beliefs and desires, as well as artefacts such as pictures and maps, and so include all the ways in which we could or do know and experience the world and ourselves. Relativism repudiates this doctrine, arguing that since any such external world is inaccessible to us in both principle and practice, it need not be postulated or considered."

In the study of ontology between the discipline of economics and social research, Lawson (1997, 1999, 2003a, 2003b) suggests 'critical realism' that is a structured unchanging and knowable universal rules that can gain ways to insights of the social world. For the purpose of this thesis, it is acknowledged that there are links between the practical performance of business sector and social study. The approaches adopted in this thesis have deviation from the aspects of the main stream of business studies or social schools of thought. The relationship between realistic (ontology) and knowledge creation (epistemology), as suggested by Darlaston-Jones (2007) is the basis to express the rationale for the forthcoming research design and methodology of this thesis

3.2.1.2 Epistemology

Epistemology is a philosophical study concern with the nature and the scope of knowledge and justified true believe (Stanford Encyclopedia of Philosophy, 2005 & Encyclopedia of Philosophy, 1967). Cruz (2003) points out that epistemology allows attempts in making sense of humanity as well as the area of social sciences and to explore the limits of human intellectual achievements. Hence the understanding of knowledge is

crucial in epistemology. There are two types of knowledge. The first is *propositional knowledge* i.e. “knowledge – that”. The second is *procedural* or *non-propositional knowledge* i.e. “knowledge – how”. Polanyi (1958) argues the relevance of both mentioned above by adapting the “act of balance”. He emphasized the importance of theoretical knowledge should balance with practical knowledge. Epistemology has developed into many incompatible, different, research (knowledge acquisition) approaches. A number of issues need to be considered. The more important issues include positivist vs. interpretivist; objective vs. subjective; quantitative vs. qualitative; theoretical vs. empirical and others (Coan, 1968; Annin et al., 1968). Each of these is now considered.

Positivism vs. Interpretivism

Epistemology is closely related to philosophy of science that focuses on philosophical assumptions, foundations and implications of science, inclusive of natural science, social science and formal science. As one of the representatives in the epistemological approach, Kuhn (1962) critically points out; science does not progress through a linear accumulation of knowledge but undergoes periodic revolutions – “paradigm shifts”. Kuhn’s works have been widely used in social science in particular the positivist debates. The positivist approach is modelled on the presentation of a hypothesis and the need to find knowledge by applying an evaluation based on systematic experiments or observations adapting both qualitative and quantitative techniques (Angus 1986; Marshall, 1994; Lin, 1998; King et al., 1995; Roth & Mehta, 2002). The fundamental assumption of positivist research is the existence of objective reality and facts that are known through these research methods. Geertz (1973) argued differently with the adaptation of interpretivist approach that systematic theories and assessment are not appropriate and the analysis must be

self-validating particularly for cultural systems. Hence the interpretivist approach is to achieve research results through analytical approach together with the goal of the researcher and not by the research methodologies (Rieder, 1985; Hochschild, 1997; Newman, 1993; Roth & Mehta, 2002). Roth & Mehta, (2002), argue that interpretivism and positivism may be integrated through the analysis and the ability to view the problem from different angles that create new findings from interpretivist and positivist approaches.

Objectivism vs. Subjectivism

Another major argument in epistemology is objectivism and subjectivism. In the world of science, science is regarded as objective because the objectivity is from scientific measurements that can be tested independently regardless from who the individual scientist is. In the world of philosophy, the distinction between objective and subjective normally refers to judgments and claims made by people (Diesing, 1966). Objective judgments and claims are free from personal views, emotion and, etc. On the contrary, subjective judgments and claims are seriously influenced by personal views. Rand (2009) argued that truths are justified in virtue of experience (objectivism) and must not be justified independent of any experience (analytic-synthetic dichotomy). Traditional objectivism concerns the realities of that which is observed, rather than the thoughts or feelings of the observer whilst subjectivism concerns the thoughts or feelings of the observer, rather than the realities of that which is observed (Stanford, 2009). Attempts have been made to transcend objectivism and subjectivism into “duality” in sociology areas (Bourdieu, 1972; Latour, 2005; Engeström et al., 1999). Yet for some specific topics including knowledge management and information management, Huizing (2007) argues that the object and subject co-constitute each other i.e. the value of both can be enhanced

through integration.

Emic/Insider/Subjective vs. Etic/Outsider/objective

“Emic” is relating to involving analysis of cultural phenomena from a perspective of one who participates in the cultural environment and is commonly known as the insider view whilst “etic” is known to involving analysis of cultural phenomena from a prospective of observers and is known as the outsider view. Emic and etic are usually considered contents of the “comparative approach” for the cultural phenomena studies and is one of the three cultural differences approaches including also denial approach and deconstructionism approach. Pike (1957) notes in his book “A Stereoscope window on the World” that the outside observer has a view and the native participant has another view and both views are necessary. Franklin (2009) explains that the outside observer attempts to understand the inside viewpoint from the objective etic categories that he has been trained to utilize to a subjective understanding of what the categories mean i.e. the emic nature. Franklin further explains that the etic view is alien, cross cultural, often measurable by the analyst whilst emic is domestic, mono-cultural, relative and contrastive in reference to a system. In general, etic perspectives include the outsider point of view, often claiming scientific legitimacy, and generally assuming an insider perspective limited by their social position and stratification group defined by objective criteria. The emic prospective includes the insider point of view, considering studied culture as what they perceive to be, consider culture exist only consciousness exists and rely on subjective criteria. However it must be noted that, generally, both viewpoints are considered necessary. The emic and etic point of view are very often linked with qualitative and quantitative interpretations (Huberman & Miles, 2002).

3.2.1.3 Methodology

Research methodology is defined as an activity used in the investigation of nature and matter and deals specifically with the manner in which data is collected, analyzed and interpreted (Patton, 2009). Methodology is also defined by its context including its processes, procedures, design, techniques, components and perspectives (Ollé et al., 1991). Hence methodology is not simply a collection of data but practically blended methods with philosophical views (Avison & Fitzgerald, 1988). The methodology needs to fit with the purpose of the research so that knowledge could be gathered and learned. The main elements of methodology comprise laws of nature, ways of thinking & modeling, values and ideologies and proof of good practice. It is, therefore, important to acquire the knowledge by seeking the valid criteria through interests of academic theories together with practice (Ghoshal, 2005). According to Fitzgerald & Howcroft (1998) the interested research dichotomies of methodological level include, quantitative vs. qualitative; exploratory vs. confirmatory; induction vs. deduction and field vs. laboratory.

Quantitative vs. Qualitative Research

The *Quantitative Research* method is identified as a positivistic approach and closely relates to empirical methods (Berg, 2001; Merriam, 1998). Quantitative research argues true knowledge is scientific approach i.e. obtained through observed facts and experiences. According to the critics of Chong (2003), quantitative research should consider departing from positivism and re-conceptualized as research tradition suggested by Laudan, (1977). Kumar, (1999), suggests that quantitative research should be selected in the event that the researcher wants to quantify the variation in a situation, phenomenon, issue or problem; or in the event that information is

gathered through predominately quantitative measurements and variables, and in the event that the analysis is geared to ascertain the magnitude of the variation. Quantitative research refers mainly to the systematic investigation of quantitative phenomena and properties and their relationships. The objective is to develop and employ mathematical models, theories and/or hypotheses relative to the studied problem. The process of measurement is the core to Quantitative Research as it provides the basic connection between empirical observation and mathematical expression of quantitative relationships. Furthermore, Kumar (1999) points out the function of statistics is to quantify, isolate, confirm or reject any biased conclusion that the researcher(s) might have drawn directly from the information analysis. Quantitative research is widely used and closely relates to philosophical positivism which contrasts Qualitative research that focuses more on interpretivism.

Quantitative techniques fall into two broad categories inclusive of interval estimation and hypothesis tests (Kumar, 1999). The interval estimation is an expansion of sample estimate, which an estimate is made through using the true value parameter from all possible data. The expansion includes sample estimate uncertainty which is quantified through calculating the upper and lower values of an interval accompanied by a given level of confidence (probability). The hypothesis tests, address also uncertainty of the sample estimate, attempt to reject a specific claim by concluding it is false. However to accept a hypothesis does not necessary mean it is true but rather there is insufficient evidence to believe it is false. It must be emphasized that statistics is an important tool to reject a null hypothesis but it has to bear in mind that the sample size is a significant factor to lead to a various result. Hence practical

judgment of statistical analysis is also critical (Zikmund, 2003; Robinson et al. 1991).

Qualitative Research is an approach of investigation applicable to many disciplines and subject matters. Qualitative researchers aim to gather an in-depth understanding of certain phenomenon and the reasons behind these phenomena. The main purpose of qualitative research is to find out the *why* and *how* of decision-making, not just *what*, *where*, *when* (Denzin and Lincoln, 2005). Qualitative research methods are considered as an interpretivistic approach and in a way to gain insights of truth through exploring the richness, depth and complexity of the phenomena (Strauss & Corbin, 1990; Eisner, 1991). It can also be used to gain in-depth knowledge on things about which much is already known but difficult to assess quantitatively (Hoepfl, 1997; Myers, 2000). Loseke & Cahil (2007) have identified that there have been a growing number of published qualitative papers, which indicate qualitative analysis is becoming the mainstream of research methods in natural science. Myers (2000) lists out three main data collection methods of qualitative research:

Interactive Interviewing	Personal interview and discuss interviewees' experiences of the matters
Written description	Target participants are requested to write their experiences of the matters
Observation	Descriptive observations of verbal and non-verbal behaviour of certain situation.

Guba and Lincoln (1994) suggest that the complete process of

qualitative research can be classified into the following main types:-

Case Study	Attempts to shed light on phenomena by studying in-depth a single or multiple-case study example (s) of the phenomena. The case can be an individual person, an event, a group, or an institution.
Grounded Theory	Theory developed inductively from a set of data collected by a participant-observer.
Phenomenology	Describe the structures of experience as they present themselves to consciousness, without recourse to theory, deduction, or assumptions from other disciplines.
Ethnography	Focuses on the sociology of meaning through close field observation of socio cultural phenomena. Typically, the ethnographer focuses on a community.
Historical Type	Systematically collects and objectively evaluates data related to past occurrences so as to test hypotheses concerning causes, effects, or trends of these events that may help to explain present events and anticipate future events.

Qualitative research is time consuming. Besides this, Eisner (1991) and Patton (1990) critically point out that qualitative research does not have any operationally defined truth tests.

Both strongly believe the following prime elements should be critically considered:-

- Coherence: the relevance of the research;
- Consensus: concur findings / interpretation with experience / evidence
- Validity: research is meaningful and provide guide to future study

The characteristics of quantitative and qualitative research may be summarized in Table 3.1. This table summarizes the perspectives of Bergman, 2008; Lincoln & Guba, 2000; Miles & Huberman, 1994.

Lincoln & Guba (1985) suggested a set of criteria to judge the quality of qualitative research work and quantitative research work as shown in following Table 3.2:-

Table 3.2 – Criteria to judge quality of quantitative & qualitative work

Conventional terms	Naturalistic terms
internal validity	credibility
external validity	transferability
reliability	dependability
objectivity	conformability

Table 3.1 Characteristics of quantitative and qualitative research

Quantitative	Qualitative
"There is no such thing as qualitative data. Everything is either 1 or 0" - Fred Kerlinger (Miles & Huberman, 1994, p. 40).	"All research ultimately has a qualitative grounding" - Donald Campbell (Miles & Huberman, 1994, p. 40).
Aim is to identify characteristics through statistical models	Aim is a full & detailed description
Use quantitative method to scientifically and systematically verify the true knowledge	Use qualitative method to deepen & enrich understanding of complex phenomena
Adopts positivism	Adopts interpretivism
Researcher uses tools to collect numerical data e.g. surveys, questionnaires, apparatus reading, etc.	Researcher is the data & information gathering instrument. e.g., participatory observation, interview etc.
Data is in the form of numbers and statistics.	Data is in the form of words, pictures or objects.
Objective – seek for precise measurement & analysis	Subjective – base on researcher's interpretation of collect data ,
Quantitative data is more efficient, hypotheses verifiable, and less social influence	Qualitative data is more 'rich', time related, and better social related issues
Researcher tends to remain objectively separated from the subject matter.	Researcher tends to engage a lot of subjective view in the subject matter.
Quantitative statistical data may complement qualitative interviews in identifying subjective constraints	Qualitative research supplement shortfall of numerical quantitative measurements

Mixed Method - Many researchers believe that qualitative and quantitative research can be effectively mixed in the same research project (Bergman, 2008; Casebeer & Verhoef, 1997; Bryman, 2005; Johnson & Turner, 2003; Brannen, 2005). According to Denzin (1970), qualitative and quantitative data may be treated as complementary, though not necessarily as compatible. Hence qualitative and quantitative approaches are not inherently good or bad but both have their own strengths and weaknesses. The challenge is to have either one perspective and widen the scope of data analysis and interpretation because research is complex and diversified in practice (Brannen, 2005). Johnson, Onwuegbuzie, and Turner (2007) and Denscombe (2008) propose a different concept of paradigm, suggesting that the research world is composed of three paradigms: quantitative, qualitative, and mixed methods, each of which is based on a specific philosophical belief system, i.e., positivism, constructivism, and pragmatism, respectively. As such, the research question(s) do not dictate completely the method(s) people adopt and by mixing the methods, there will not be a defined use of “guided qualitative conversations” or “structured survey questionnaires”, correlation analysis or discourse analysis. Yet there must be some kind of a guide line for such mixed method. Dellinger & Leach (2007) propose a framework for judging the quality of mixed methods research. In order to find possible means to combine data and make sense out of them, Brannen (2005) suggests four possible ways of combining data including corroboration, elaboration, complementarity and contradiction. Perhaps Green & Preston (2005: 170) have a good conclusion to the mixed method: “The bottom line is to conduct empirical work to theorize: to provide viable representations of what is *real*; of what the problematic are which animate these realities; and to represent how we think we made our knowledge of these realities ...”

The rationale of such mixed methods research is underpinned by the principle of Triangulation. Triangulation is the combination of one or more research methods including field notes, interviews and site documents to come to the conclusion of a research claim (Olsen, 2004). In the triangulation method, quantitative findings are able to be confirmed with qualitative findings (and vice versa) and improve the end result of the research but such conclusion can also be problematic with different concerns. Bryman (2001, 2005) points out that there are various concerns in triangulation method including difficulty in mutual legitimate support, inconsistency in findings, problems of interpretation, raise further argument in mixed method research and may cause credibility issues.

Exploratory vs. Confirmatory

Exploratory Research is an approach based on adapting descriptive statistics (Thompson, 2004). The exploratory analysis mainly seeks flexible means to examine data with any pre-fixed perception, tries to evaluate assumption validity, relies on graphic display and finds out magnitude of errors (Fabrigar et al., 1999). The advantage of this research method is that it provides realistic accurate results, better understanding of the processes, and a more flexible means to generate hypotheses. The down side is that it is unable to provide definitive answers, difficult to avoid optimistic bias and often needs justification (Jaeger & Halliday, 1998).

Confirmatory Research is an approach based on the deduction of inferential statistics (Thompson, 2004) where the objective of the research is to find out that the theory is supported by the facts. The confirmatory analysis mainly relies on exploration model and tests hypothesis but emphasizes numerical verification where definite answers to specific questions are answered (Jaeger & Halliday, 1998). The advantage is that it can

provide the right information in the right situation and has well established theories and methods. However, the down side is misleading precision in non-ideal situations, difficulty to spell out unexpected results and pre-determined ideas often drive the analysis (Jaeger & Halliday, 1998; Thompson, 2004).

In general, the exploratory approach tends to cope with information requirement in the early stage of decision making process whilst confirmatory approach will come into the picture later (McQuarrie, 2006). Turkey (1977) has made a good conclusion of these two research approaches: "Exploratory data analysis is detective in character. Confirmatory data analysis is judicial or quasi-judicial in character....." Hence the exploratory findings have to uncover clues and indications, and the confirmatory data analysis will be able to take necessary considerations.

Induction vs. Deduction

In research, it is necessary to argue and convince the reader of the truth or falsehood of the research proposal. Two of the common methods used are induction and deduction. Induction is usually described as moving from the specific to the general, while deduction begins with the general and ends with the specific.

Inductive method is based on two core elements of the science theory including observation and experiment i.e. scientist observe phenomenon, form certain hypothesis then perform necessary experiments for verification, eventually establish a theory. Then, when all is said and done, creates a theory. The deductive method is the opposite of the inductive method where scientists commence with a theory and then perform experiments and observations to test the theory. Einstein (1919) indicates that the history of science has been built on

deductive scientific methodology: “The really great progress of natural science arose in a way which is almost diametrically opposed to induction. Intuitive comprehension of the essentials about the large complex facts leads the researcher to construct one of several hypothetical fundamental laws... both the fundamental law (axioms) and the consequences form what we call a theory.....” It is obvious why Einstein sees deduction as the better approach – because, with quantum theory, it practically makes more sense to move towards the deductive method.

Charles S. Peirce develops a third research approach called abduction, which is a mix of the inductive and deductive methodology (Menzies, 1996). Abduction is characterized by the reasoning “from effect to cause” and as “the operation of adopting an explanatory hypothesis” (Peirce, 1878). There are a number of critics to abduction approach from realism that concerns mainly the logic of abduction (Laudan, 1984; van Fraassen, 1980, 1989; Fine, 1986).

The main stream in philosophical forms of reasoning is between deductive reasoning and inductive reasoning. Deduction is mainly considered as the formal logic whilst induction is primarily carried out in the area of informal logic or critical thinking.

Field vs. Laboratory

When researchers study behaviour or adopt social environment observational methods, field research is an appropriate research technique especially for field observation. This involves direct and in-direct observation where direct observation will involve field vs. laboratory; participatory vs. non-participatory; structured vs. non-structured; and overt vs. covert methodologies. Wills & Williams (2004) argue that in-

sight is built from multiple sources inclusive of data, with information from market and management knowledge. Ryals & Wilson (2005) point out that experiments, measuring one or more variables, can be divided into experimental and quasi-experimental design that is normally applicable to management or social research including field experiment (random or systematic – quantitative), laboratory experiment (random or systematic – quantitative), quasi-experimental qualitative design (natural – qualitative) and market field study (natural – quantitative).

In the laboratory study, experimental study can be performed within a controlled environment that can reduce the number of irrelevant variables affected by the dependent variables (Lee & Tan, 2003). For field study, it is common to adapt the design with control group throughout the whole process (Katz et al., 2001). Sullivan (2000) discusses the use of randomly selected control groups with appropriate size and representative in the overall population in research. Frayne and Geringer (2000) point out critically that a small sample size may be used for business research as long as the sample is a matching sample within the control group. Fitzgerlad & Howcroft (1998) conclude that field-based research emphasizes on realism of context in natural situation but precision in control of variables and behavior are not guaranteed whilst laboratory-based research can control precision of variable and measurement but their intensity and variation may not be achievable.

3.2.2 Selection of Research Approach

The Literature Review chapter on the construction industry refers only to construction work implementation/operations. Toole (2006) has a very accurate definition marked for construction: “construction is the application *by people* of technology developed *by people* to achieve goals established *by people* involving the erection or

retrofitting of infrastructure and buildings”. This definition implies that the focus of construction research shall be upon actions of people who execute and perform all activities, from management to production of end products, in the construction industry. The fact that people play a key role in all activities of construction suggests the construction research should include social science research design and methodology applications.

It is important to understand the relationship between research philosophy, research approaches and also research strategies. The research process should make clear the distinction between research methods (qualitative and quantitative; induction and deduction; exploratory and confirmatory; field and laboratory) and comprehension of philosophy (positivism and interpretivism). Saunders et al. (2003) suggest that the relationship between research philosophy, research approaches and research strategies may be illustrated by the figure shown in Appendix D: The Research Onion. Saunders et al. (2003) also critically point out that the polarized groups of research approaches is misleading and of no practical value. Knox (2004) critically points out that methods and their application are influenced by the philosophical arguments and the critical analysis and linking of the research approaches to the appropriate research hierarchy (level) will be crucial to the selected research approach.

The selection of research approach is important as it lay down the philosophical bases as well as the consideration of paradigm of the inquiry (Dainty, 2007; McCallin, 2003; Graham & Thomas, 2008). According to Guba & Lincoln (1994), this paradigm is defined as “the basic belief system or worldview that guides the investigator, not only in choices of method but also in ontologically and epistemologically fundamental ways”. This definition is practically in line with the different research levels inclusive of ontological level, epistemological level and methodological level suggested by Fitz-

gerlad & Howcroft (1998). This is also in line with the Research Onion suggested by Saunders et al. (2003).

In order to ensure the appropriate selection of research approach for the research in this thesis, it is necessary to review the research questions:-

- Why do Hong Kong contractors want to expand their business overseas?
- How do Hong Kong contractors select their overseas construction market(s)?
- How will Hong Kong contractors retain competitiveness in a foreign environment?
- How will Hong Kong contractors gain their required knowledge through a large number of unknown elements and set up their overseas operations?
- How should Hong Kong contractors avoid risk when working in a foreign environment?

At the highest level, ontology covers all areas of life/objects and their ties. This thesis adheres to the realism research philosophy in which the understanding of the research is to seek the truth from the external world that exists independently of our mind. This requires the need to explore such reality through all the necessary and possible ways to know and experience the world and business life. This is demonstrated throughout the research, from research questions to the formation of the research approaches and eventually to the adaption of the subsequent structured research strategies. However, the selection of realism research philosophy includes both “soft” and “hard” camps, (in accordance with suggestion of Fitzgerald & Howcroft, 1998), where the argument of epistemological and methodological levels will be discussed separately.

These research questions formulate through unsolved areas in the construction industry practices regarding the gap between the contractor's business performance as well as the social / environmental performance.

The literature review commenced in line with the chosen area of concern in the construction industry to find out how and what other researchers have performed or found out in the similar research. It is only a subjective (positivist) expectation that the theory, methodology and practice will be integrated without problem. In particular, in many instances, theories are disconnected to the essence and characters of practice with which different people base their specific needs (Bannister, 1981; Boyd & Wild, 1996). It has to borne in mind that, in the 'real world', it is necessary to debate what the theory is and why the theory is used. Hence practical experiment or experience should be carefully monitored and examined in order to ensure the conceptual together with empirical thinking (not to consider separately) are sufficient to advance to theory.

The research questions of this thesis originate at an empirical level where the contractor's business performance relates to the continuing performance of the firm in a changing environment. Researchers have commonly recognized that the researches to contractors' business performance are insufficient (Nudurupati, 2007; Swarnadhipathi & Boyd, 2008; Bassioni et al. 2005 & 2004; Love & Holt, 2000). It is necessary to apply emic (insider's participation) and etic (outsider's independence view) to understand the embedded and underlying practical knowledge. The 'emic' and 'etic' approach also induce another similar major argument with respect to the objective and subjective approach. When the practical participation may bring direct and appropriate information but subjectivity is unavoidable whilst a totally independent observation in a totally objective approach will also lead the research unable to touch the underlying or hidden phenomenon. Instead of the po-

larized and contrasted positions, methodological pluralism is commonly accepted by the contemporary research design (James, 1979; Londoño & Frenk, 1997; Weinstock, 2010). Pluralism is defined as an energetic engagement with diversity; an active seeking of understanding across lines of difference; a commitment of relationship with others but not in isolation; and a base of dialogue where two sides of the coins will be considered and understood but not necessarily agree with each other (Lester & Stewart, 2000; Karger & Stoesz, 1998; Eck, 2010).

For the purpose of this thesis, the research approach will adapt a deductive approach where experience and knowledge will be gained from practice and through structured methodologies to explore the theory or resultant effects in the construction industry.

In recent construction industry research, pluralistic strategies are encouraged and becoming more frequently adopted (Roth & Mehta, 2002; Toole, 2006; Swarnadhipathi & Boyd, 2008). The pluralistic research methodologies allow mixed methods that will reduce the disadvantages of single method whilst simultaneously maintaining the advantage of everyone of them or their integrated result (Dainty, 2007; Creswell, 2003; Bryman, 2005; Cook & Campbell, 1979; Judd et.al., 1991; Kaplan & Duchon, 1988; Johnson & Turner, 2003; Brannen, 2005). Hence, the research of this thesis is more appropriate to adopt pluralistic research design, where pluralist methodologies could achieve deeper insights of the embedded and underlying of the practical phenomenon i.e. the ways that construction management 'manage' and the bases of the practitioners formulate their decisions.

It is essential to allow independent evaluation of the design and methods adapted for the research questions. Furthermore the pluralism is applicable wherever resources can be sought and gathered within the permissible range of the epistemological and methodological approaches. It is recognized that ontological re-

alism will play a major role throughout the research but the justification and evaluation of the selected approaches and strategies shall remain transparent and operable.

3.2.3 Pluralism and Research Methods

In the context of this thesis, pluralism refers to the adoption of different methods for investigating the business performance of the construction industry and the social effects. As discussed in the previous sections, the argument of the adoption of pluralism is the recognition of the role applied to as well as the standpoint of the researcher and the need of integrating multi-view-points in the social research (Dainty, 2007). According to Lawson (2003b), pluralist arguments have been developed in conjunction with critical realism as a part of ontology theory related to economics. Mearman (2005) argued that research within the context of critical realism needs a mode of inference that can bring people to observe the surface and underlying causes of the phenomena which is a form called "*retroduction*" above the inductive or deductive logic. Hence retroduction is a thought operation that involves moving from knowledge of events to explanation of their causes that involves moving between deferent domains of ontology (Lawson 2003b, p. 80). Based on the guideline of philosophical framework provided by Lawson appropriate research methods must be selected to suit the needs of each research project.

As mentioned in the previous section, there is a growing platform of literature that argues in favour of the adaption of plural research methods. Hence there is a need to understand the difference between method and methodology. According Dow (1990, p. 353), methodology refers to vision or world view that informs ideas of reality and knowledge formation, defines aims of theory and suggests criteria for theory appraisal whilst method guide the selection of specific questions for research and the analysis tool that are used I address these questions. Dow (2003), however, has

asserted that “diversity of method need not entail diversity of methodology”. Dow (1990) concluded that diversified methods remain as appropriate with critical realism as long as they provide priority to understanding economic processes in historic time. Downward & Mearman (2005) also support the use of combined research methods but argue that triangulating method should be adapted to combine multiple research results for a specific research, which is achieved through insights of data collected in different time, situations or subjects; different theoretical traditions, multi-investigators and different research methods. Within the scope of retroduction approach, mixed method research will be applied to investigate the business performance of the construction industry and the relevant social effects.

There are a number of research methods to choose from, considered and justified. The main research method groups that can be considered include, but are not limited to, the following:-

3.2.3.1 Experimental Research Methods (Bynner, 1980; Brandt & Binder, 2007)

Straightforward experiments generate clear and unambiguous statistical, analyzable, data with which to test a hypothesis. This method usually requires thorough design with, in case of major experiments, a large expenditure. This therefore may be a major influence to the end result in the event that experimental environment is different from the natural environment. There are also ethical concerns as experiment may be ‘too’ accurate and may omit qualitative ‘human’ concerns.

Practical works blended with research trials and evaluation or with practitioner research i.e. action research (Bynner, 1980; Niedderer, 2004, Brydon-Miller et al., 2003, Mattelmäki, 2006) are, therefore, considered the practical approach of the experimental research method.

3.2.3.2 Opinion Based Research Methods (Sillars & Hallowell, 2009; McQueen, 2002)

Questionnaires are effective measures in gathering opinion based data from large samples to test hypothesis concretely formed and outlined (McQueen, 2002). They involve designing an experiment and collecting quantitative data in a directional method of intensity measurement. Research usually carries out with the application of "numerical scale" to measure the intensity of behavior, for example the Bandura Bobo Doll Experiment (Bandura et al., 1961), Asch Conformity Experiments (Asch, 1951), Opinion Extraction Approach (Carenini & Moore, 2006), Likert Scale (Likert, 1932) and others.

In the construction industry, the following methods are considered appropriate for professional opinion or judgment since sensitivity of information is a major hurdle for researchers (Sillars & Hallowell, 2009):-

- *group-brainstorming* (Dunnette et al., 1963) ~ through a group of participants to brainstorm a list of ideas using procedures that encouraged creativity and discouraged criticism and evaluation;
- *the Delphi method* (Kaplan et al., 1950) ~ a systematic, interactive forecasting method with a group of experts who answer questionnaires in multiple rounds and aim to achieve minimum deviation in the answer based on the facilitator's anonymous summary of the group's forecasts;
- *the Nominal Group Technique* (Delbecq & VandeVen, 1971; Delbecq et al. 1975) ~ a technique that is structured for small group discussion with its process encourages group participation and prevents single person domination, and results in a set of prioritized solutions or recommendations; and

- *surveys* (Babbie, 1973) ~ widely adopted method particularly involving participants' unique experience or inner state. They also have advantages in effective collection of information, statistical techniques in analysis, error-free standardized process and a low cost. But, the down-side is subjective personal factors, self-selected respondents and ethical issues of participants.

3.2.3.3 **Observational Research Methods** (Trochim, 1999, Reason & Bradbury, 2001; Gill & Johnson, 2002)

Observational research comprises a group of different research methods where the research attempts to observe a phenomenon without too much interference. The characteristics of observational research methods are case studies include training, participation in the study group, time spent on field, sampling and data collection techniques (Powell & Conaway, 2004; Williamson, 2000). These methods include non-participant, complete observer, observer-as-participant, moderate or peripheral membership; participant-as-observer (Active Participation), and complete participant (Gold, 1958; Spradley (1980; Adler and Adler, 1994; Gorman and Clayton, 2005). Gill & Johnson (2002) has critically suggests that in ethnographic research the extent to which researchers participate or observe is a continuum and proposes a taxonomy showing dimensions of overt vs. covert (revealed vs. unrevealed) combined with dimension of participant vs. non-participant observation (as shown in Appendix E). These characteristics are now discussed in more detail:

- *The Non-participation method* (Spradley, 1980) has no involvement of insiders and the research is only observed from a totally different ground. Transaction Log Analysis is an example of this type of method. This may be described as a "non-intrusive method for collecting data from

a large number of individuals for the purpose of understanding online-user behavior" (Davis, 2003). However the downside of this method is that it does not allow for any in-depth understanding of people's behavior in their own world.

- *The Complete Observer* (Gold, 1958; Gorman & Clayton, 2005) is in the scene but does not participate or interact with practical works. The downside of this method is no one can accept the researcher to be invisible while, at the same time, the researcher is ubiquitous in order to eavesdrop (Pearsall, 1970), which gives rise to ethical issues. However from a data collection point of view, this method has its value.
- *The Observer-as-Participant* (Gold, 1958; Pearsall, 1970) applies to more observation than participation where the researcher will interact with the insiders by means of short interviews. However the researcher must maintain strong research orientation and not cross into the friendship domain (Adler & Adler, 1994, p. 380). The advantages is that insiders may be more willing to open up to independent persons and there is less temptation for either the observer to go native or the natives to include observer permanently in their lives" (Pearsall, 1970). The downside is that the short interviews could bring misunderstandings or misconceptions to the researcher who may not have aware (Gold, 1958). Further, Pearsall (1970) saw that the insiders do not benefit themselves due to the limited opportunities to gain knowledge of total situations.
- *Moderate or Peripheral Membership* (Adler & Adler, 1994; Fabbri et. al., 2008) applies to the researcher who requires to maintain a balance between being an insider and an outsider, between participation and observation" (Spradley, 1980, p. 60). This implies that the researcher interacts

with insiders and engages in the same activities, but does not act as a core member of the group.

- *Participant-as-Observers or Active Participation* (Walther, 2006; Livingstone et al., 2005) applies to researcher becoming more involved with the insiders' core activities without committing to insiders' values and goals but may become friends with insiders, which can help to understand the details of the social environment of studied case. However, the downside is the researcher may lose his/her objectivity.
- *Complete Participation* (Lancaster, 2005; Baker, 2006) applies to researchers who are fully involved and becoming 'native'. Researchers act as a member of the group or community and able to get in touch of all kinds of understanding of the inside information. The downside of this method is that such complete participation will induce self-consciousness to the researcher and he/she may not be able to engage in the study as an ethnographer. Lancaster (2005, p. 103) critically points out that full participant observation has produced some of the most useful and important research studies within the field of observational research.

3.2.4 Research Strategy

Research is executed by adapting specific activities including administration, surveys, analysis, experiments, case study, participatory observation, build up root definitions and models. There are many factors of the research design that are required to be taken into account and evaluated based on the research questions, ethics and time frame.

The above chapters and sections have identified a number of research theories, philosophy, methodologies and methods.

These research approaches have provided a strong base for consideration of the research undertaken in this thesis and on which conclusions and decisions can be drawn. The articulated learning results of this thesis are essential through an effective research design. Archer (1973) wrote: "*Design is that area of human experience, skill and knowledge which is concerned with man's ability to mould his environment to suit his material and spiritual needs.*" Therefore, design can be understood as practically a rational, logical, sequential process intended to solve problems. Taxonomy is a comprehensive research and development system that facilitates learning analysis and research design (Kyllonen & Shute, 1989). Jonassen & Tessmer (1997) suggest taxonomy should contain more than one characteristic and should have embraced more than one assessment criteria and methods. Taxonomies including its contemporary modifications as illustrated in many textbooks have taken consideration of many standard classifications of learning outcomes, strategies and measures (Bloom et al., 1956; Dick & Carey, 1991; Gagné et al., 1992; Jonassen et al., 1993; Dick et al., 2005; Fauser et al., 2006). Taxonomy is commonly used in education studies and the main taxonomy theories include: the Bloom Taxonomy of the Cognitive Domain (Bloom, 1984); Krathwohl's Taxonomy of the Affective Domain (Krathwohl, 1998); and Psycho-motor Domain (Simpson, 1972). Based on suggestions of these sources, a taxonomy, as shown in the following Table 3.3, for this thesis that has been prepared to show the outcomes ('soft' or 'hard' research dichotomies as suggested by Fitzgerald & Howcroft, 1998), strategies and measures (single or combined methods adapted in this research).

Table 3.3 outlines some of the methods and their responding approaches defined and adapted in this research. However, in considering the adoption of these methods it is also needed to understand and know how the information required by the research is obtained as this will affect the conclusions or outcome. There are

different methods selected for this research (as shown in the Table 3.3) for which these selections should be explained and justified. The explanation and justification of the method should confirm the selected methods are appropriate, consistent, valid and reliable in relationship with the objectives and goals of the research. Furthermore, the methodology should be reviewed and discuss the potential problems that can arise and suggest the necessary precautionary steps to avoid the pitfall or minimize the impact.

Table 3.3 Hierarchical Taxonomy for the research based on the 'soft' vs. 'hard' research dichotomies of Fitzgerald and Howcroft (Fitzgerald & Howcroft, 1998)

Research dichotomy	Soft		Hard	
Ontological Level	Realist			
Epistemological Level	Interpretivist/ Subjectivist/Emic		Positivist/ Objectivist/Etic	
Methodological Level	Qualitative/Exploratory/ Field/Induction		Quantitative/ Deduction Con- firmatory/Laboratory	
Methods	methodology	used	methodology	used
Literature Review	Qualitative	⊙	Confirmatory	⊙
Laboratory experiment				
Field experiment	Exploratory	⊙		
Surveys	Qualitative	⊙	Quantitative	⊙
Case Study	Qualitative	⊙	Quantitative	⊙
Interactive interviewing	Qualitative/Field	⊙		
Historical review			Quantitative	⊙
Action research	Exploratory / Qualitative	⊙		
Opinion based research	Group Brains- torming	⊙		
Observational research	Full Participant	⊙		
Conceptual Inspiration	Exploratory	⊙	Deduction	⊙

3.2.4.1 Action research

Action research is a social research approach with the action researcher interacting with an organization in order to develop, diagnose or solve specific problems whereby the findings will have knowledge contribution in a particular empirical domain (Bryman, 1989; Hult & Lennung, 1980; Brydon-Miller et al., 2003; Dainty, 2007). However Reason & Brabury (2001) in his 'Handbook of Action Research' suggests action research "has the potential to transform the very idea of social science". This indicates that action research practice includes various forms of active participant or complete participation as mentioned in the 'observational research method' and 'field experiment'. Furthermore, all non-participants, complete observers, observer-as-participants, moderators participated in the 'observational research method' are able to increase their experience and help the team to improve its vision, strategy and performances. Chandler & Torbert (2003) critically point out that action research could be a valid training/education process for first-person practice and second-person practice and is able to extend to wider collective terms, a group practice.

Why has action research been selected as a research method in this thesis? A fundamental value created by action research is the respect of people's knowledge and their ability to understand and address the issues confronting them and their community (Brydon-Miller et al., 2003). The basic values of action research include that it is a research process that brings knowledge and experience of people, contributes a belief that brings democratic processes to achieve positive social change and a commitment to action (Brydon-Miller et al., 2003; Akdere, 2003; Ramos, 2006).

In the construction industry, action research applies to disciplines including, but not limited to, construction management

and construction performance and provides both resolution of practical problems as well as creation of theoretical and conceptual knowledge (Errasti et al., 2007; Nudurupati et al., 2007; Sexton & Lu, 2009; Azhar et al. 2010). It is also the wish of this researcher to advance and contribute both theory and practice to the subject of action research.

There are different types of action research. These different methods as mentioned in Section 3.2.3.1 and 3.2.3.3 include action research in Experimental Research Methods Group as well as non-participant, complete observer, observer-as-participant, Moderate or Peripheral Membership, participant-as-observer (Active Participation), and complete participant in the Observational Research Methods Group. The characteristics of these different action research related methods are dependent on the status of the researchers and degree of involvement in the actions they have taken. Chandler & Torbert (2003) suggest a 27-types of action research where they interweave first-second-third person research participation with first-second-third person practice where terminology first, second and third person used is similar to that in English grammar except the first-person plural is considered as second person or third person pending on the people engaged in the mediated practices. They argue that the notion of interweaving of the 27 methods of action research delivers a vision of an inquiry practice that generates past-orientated objectivity, present-orientated subjective spiritual awakening and future-orientated inter-subjective trust, mutuality and commitment to shared vision of an organization. The foundation of action research is cycles of action and reflection where the personal involvement is personal, wholly or partially, and the cycle is messy, not linear plus the most important element that is reflection should be collaborative and subsequently drive motivation (Ladkin, 2003). Such conclusion matches with the

intention of this thesis. Therefore it is necessary to understand the multiple types of action research and their interaction.

Action Research

Action Research enables an individual researcher or research team to improve the quality of the final result of a process or product rather than to produce theoretical knowledge (Elliott, 1991). The characteristic of action research is that specific goals are not pre-defined but the researcher initiates change and provides direction towards realization and transformation of values through process. This means that the researcher takes the lead of the research process and improves his/her personal skills and experience or knowledge during the research process. This improvement takes place together with the participants. The researcher and the participants jointly execute actions and analyze results, based on the result of the reflection-cycle and then propose follow-up actions. The researcher and the participants act together to achieve satisfactory results.

A simple rule for such action research is that the researcher does not necessarily engage in these actions (Holian, 1999) but takes the lead and makes the necessary judgments to determine the future situation. The practical end result is knowledge grounded in the researcher's experience. The overall advantage of action research is that it over-rides the theoretical or analytical contributions (Azevedo, 2009). Action research may include observer-as-participant and Moderate/Peripheral Membership methods in the Observational Research Methods Group together with action research in the Experimental Research Methods Group.

Participative Research

The Participative research method aims to develop an environment and process where knowledge emerges with actionable 'local theory'. It is characterized by active collaboration between researcher and participants through a loose defined group process to study and change social reality (Sohng, 1996). Participants may be any members of the organization who have the intention to take on active roles and engage directly to identify problems, choose data collection methods, execute analysis, summarize the results, and review findings and create action cycles (Nadler, 2004; Eldon et. al., 1981). The advantage of participative action research is that it is group orientated and self-organized and able to accept changes as required. It leads to a group achievement rather than individual achievement (Boston, 2004; Choudhry et al., 2004). Researchers learn together with participants. The researcher acts basically as an observer even though he/she may contribute in the collaborative problem solving process (Reason & Rowan, 1981; Hughes & Seymour-Rolls, 2000).

Participative research is a research approach that provides different ways in relating to natural and social environments with the researcher retaining an on-going relationship with the organization. This participative action research includes observer-as-participant and Moderate/Peripheral Membership methods but with a deeper engagement with participants.

Participatory Action Research

Participatory action research aims to achieve the dual-goal of improving capacity and practice, and achieving practical objectives and changing social reality through group participation. Those affected by a problem participate in the research. The growth and development of the participants

becomes the critical part of the desired outcome. This method is usually initiated by the organization and engages researchers to take part in the control of the social process designed with the participants in the organization. The research approach is jointly designed by professional researchers and the active participation of members of the organization as they are the people affected and is therefore in the most appropriate position to participate and propose solutions. Domestic and experiential knowledge and information are collected and analyzed. The researcher cannot control the research design, but may adapt appropriate measures to help the process of the research design. Participatory action can contribute to advancing theory and knowledge along with achieving practical results particularly when situations are complex. The Researcher together with the organization are able to gain knowledge and experience through the process of problem solving and contribute to the organization change along with advancing theoretical understandings across multiple disciplines (Azhar et al., 2010).

Summary of Action Research, Participative Research & Participatory Action research

The three action research methods described above all involve active participation, open-ended objectives, and high levels of commitment of the researcher and the participants to the solving of the research problem. Bell et al. (2004), summarize the above three different types of action research methods and illustrate their similarities and differences in the following summary Table 3.4:-

Table 3.4 Action Research Summary Table (Bell et al., 2004)

Action	Participative	Participatory Action
Interpretivist	Interpretivist	Interpretivist
Researcher achieves learning, and larger group may also learn	Researcher and select participants learn about larger group	Participants (and researcher) achieve learning within larger group
Researcher facilitates the process, and collaborates with clients to create or actualize change. Researcher typically does not engage in change actions.	Participants make essential decisions in research project by which they are affected	Actions taken through process – action is incorporated into research itself
Researcher collaborates with 'clients'	Researcher works with 'participants'	Researcher works with 'participants'
Researcher and clients engage in self-reflection	Researcher works with select participants / No Expert	Participant issues, actions and learning highlighted / No Expert
3rd party researcher engages in change as expert	Group works to change self with researcher not as expert	3 rd party group works to change self and larger groups
Subjective	Subjective	Wholistic
Emergent property: improved capacity and wisdom	Emergent property: self-knowledge	Emergent property: creativity

Consideration of the above table shows that that the three types of action research also match with the research methods grouped in Section 3.2.3. The following Comparison Table 3.5 shows the relationship between the above mentioned action research methods:-

Table 3.5 – Relationship between Action Research Methods

Method Types (Sec. 1.2.3.1)	Action	Participative	Participatory Action
Method Group (Sec. 1.2.2) Method Type	Experimental Research Methods Action research + Observational Research Methods observer-as-partic ipant	Experimental Research Methods Action research + Observational Research Methods Moderate or Peripheral Membership	Experimental Research Methods Action research + Observational Research Methods participant-as-obs ver (Active Participation)

This thesis focuses on the competitiveness of Hong Kong contractors in the global construction market. To study in detail the business performance of a Hong Kong contractor was considered an essential aspect of this research. It was therefore decided to adopt participatory action research methods to complete this study with the researcher's participation within the Hong Kong contractor organization with the aim of "improving capacity and practice, and achieving practical objectives and changing social reality through group participation".

Reviewing past studies, there have been a number of examples of complete participation in participatory action research where researchers were able not only to gain insights into the organization but to examine first hand information on the decision-making processes and gain first hand information (Hall, 1981; Pinfield, 1986; Ritti & Silver, 1986; Montero, 2000; Heene, 2005; Foldy, 2005; MacKinnon, 2009). This demands that when the researcher engages in a completely participated participatory action research there is a full commitment by the researcher to the participated participants and organization. Furthermore, the researcher is fully accepted by all participants and able to share the common goal, needs, fears, and

motivation of other staff. This means that the action group includes the researcher who is considered an integral member of the participants and participates in all data collection, planning, strategy building, process of decision making, reviews the outcomes of decisions and, wherever necessary makes revisions after reflection. This process (*action-reflection-action process*) requires the researcher to share all the emotional joy and pain experienced by the organization staff members during the processes. More important is that all the knowledge and experience gained by the group will be continued or prolonged and does not get lost due to the departure of the researcher. The integration of complete participation and active participation represents the blending of the two 'theories of action': one aimed at explaining the paradox of participation and one for dealing with it more effectively (Arieli et al., 2009). The validity of the integration of complete participation and active participation is determined by the width and depth to which the researcher has participated as well as his/her knowledge gained and the taken action that conforms to the value of the research. In order to meet the needs of the research in this thesis, it is decided to adopt an action research approach adopting participatory action research method with active first-person participation. The action research approach also includes the use of case study methods and survey methods. These are now considered in the context of this research.

3.2.4.2 Case Study

Case study is a methodology that carries out holistic and in-depth investigation to a particular situation/event adapting certain developed procedures to collect data from multiple sources and to test theories and models relating to practical work in the real world (Feagin et al., 1991; Yin, 1993 & 1994; Stake, 1995; Tellis, 1997). The application of each case study

should be systematically studied and considered as a stand-alone situation which is tested to be valid to its findings. The Case study may stand in its own right, but it is often adapted in pluralist approach in which other methods can be integrated to investigate the same dependent variables (Meyer, 2001; Yin, 2003). A Case study is not intended to be solely a study of a whole organization but rather a focus or analysis on specific issues. Hence the case study method may be selected when it is necessary to understand and examine the width and depth of the processes of activities in organizations (Patton, 1987). The advantages of case studies are that they enable researchers to gain a holistic view of phenomenon or events as information is obtained from various sources (Gummesson, 1991).

There are six applications of case studies (methodology studies of United States General Accounting Office ['USGAO'], 1990):-

- **Illustrative Case Studies** are descriptive studies to illustrate the case to ensure people understand the situation through a common language written for the situation.
- **Exploratory (Pilot) Case Studies** are applied to identify issues and select types of methods prior to the main investigation. The downside of this is it could be prematurely released as conclusions and mis-interpreted due to inadequacy of information.
- **Cumulative Case Studies** is used to aggregate information from multi-sources at different time frame. The advantage is past studies can be used as part of the study and save costs but the downside is studies may be repetitive.

- **Critical Instance Case Studies** examine one or more sites for either examining a specific issue with little interest in generalizability or challenge a highly generalized claim. They are suitable for cause-and-effect issues but exploration of underlying concerns is critical to this application.
- **Program Implementation Case Studies** are applicable to extensive studies over time to interpret findings of implementation variability. Multiple sites, quality information and investment in time are all crucial factors to this application.
- **Program Effects Case Studies** are used to determine the impact of programs and provide inference to reasons for success or failure. The downside is it may be difficult to answer questions adequately and retain manageable sites.

Yin (1994) reminds researchers that any attempt to separate different types of case studies or to conceive them as a hierarchy is dangerous. Furthermore Yin (2003) suggests research in relationship with business often limits studies to exploratory uses whereas pilot case studies may be used to formulate questions or to test hypothesis. In fact, the critical point of case study is its empiricism, and its ability to provide an in-depth and multi-source inquiry that can explore holistic picture of a contemporary social phenomenon in the dynamic environment (Eisenhardt, 1989; USGAO, 1990; Gummesson, 1991; Hartley, 1994; Yin, 1994).

The design of case study is crucial to offset any criticism in terms of its robustness as a research tool (Zainal, 2007). The case study approach is selected as an appropriate research framework because:-

- the case study is an useful interpretivist research tool as it enables researchers to examine data both in both width and depth (Kelliher, 2005);
- the case study is recognized as a prominent and widely adapted tool in research issues with regard to education (Gulsecen & Kubat, 2006), sociology (Grassel & Schirmer, 2006), community-based issues (Johnson, 2006) and construction (Eisenhardt, 1989; Phelps & Horman, 2010);
- the case study allows researchers to investigate the limitations of quantitative methods in providing holistic and in-depth explanations of the social and behavioural problems (Leahey, 2007);
- the case study allows the researcher to integrate both quantitative and qualitative data and to understand the behaviours of the actor's perspective (Gelo et al., 2008);
- the case study can explain the processes and outcomes of a phenomenon through complete observation, restructuring and analysis of the cases under investigation (Tellis, 1997);
- case studies are a practical solution when a large sampling or studies is difficult to obtain (Lenth, 2001); and
- finally case studies, especially in studies of real-life situations related to social and construction issues are widely adapted in literature (Kyburz-Graber, 2004).

However, case studies are often criticized for the tendency to have a bias in their interpretation of the data (Thompson, 1998) and case studies may also criticized when establishing reliability and generality when a small sampling method is deployed (Naslund, 2002).

3.2.4.3 Survey

Survey research is a non-experimental and descriptive research method generally used when a researcher intends to collect data on phenomena that cannot be directly observed (Kumar, 2005). Survey research is quite different from the other non-experimental co-relational research which relates more to analytical design than to research design (Belli, 2009). Surveys are extensively used in library, education, human resources, information science and construction industry to assess the positions and characteristics of a wide range of subjects (Bureau of Labor Statistics, 2010; Wilson, 2004; Ng Tye & Chau, 1995). When considering a survey researchers sample a population, which is defined as any set of persons or objects that possesses at least one common characteristic (Adèr, 2008). Since the whole population may be quite large, researchers usually take samples from only a small proportion of the population. Survey research is accepted as a dominant and efficient form of data collection but is also criticized as a method which artificially forces respondents to formulate opinions, thereby masking the complexity of conflicting data. Critics also note that in many arenas surveys poorly predict actual behavior (Lowe & Lorenzoni, 2006; Morgan, 1990).

Overall, survey research is frequently selected as an appropriate research framework as it adopts a survey instrument inclusive of interviewing and questionnaire methods to gather responses from respondents. Survey research can be either quantitative or qualitative (Weinreich, 1996).

Quantitative survey methods provide quantifiable, reliable data that are usually generalizable to some larger population and are considered as appropriate for comparing outcomes with baseline data. The limitations of the quantifiable survey research appear when the phenomenon under study is difficult to

measure or quantify, in particular when dealing with human behaviour in the real world.

Qualitative survey research includes observations, face-to-face interviews and focus groups, which provide the researcher with the insight of the culture or situation and perform direct interaction with the people under study helping the researchers to understand the meanings of social phenomena and the underlying behaviours. Hypotheses are generated during data collection and analysis, which are both considered to be subjective. In the qualitative paradigm, the researcher becomes the instrument of data collection, and results may vary greatly depending upon who conducts the research. The downside is that data collection and analysis may be labour-intensive and time consuming.

Steckler et al. (1992) suggest research models by integrating qualitative and quantitative methods, which are not mutually exclusive and may operate under one or more of the following approaches:-

- in the first approach, qualitative methods contribute to the development of quantitative instruments, e.g. use of focus groups in questionnaire construction;
- in the second approach quantitative study adapts qualitative interpretation or explanation;
- in the third approach quantitative results are used to interpret predominantly its qualitative findings e.g. group participants fill out survey questionnaires; and
- in the fourth approach an integration of the two methods is used in parallel to cross-validate and build upon each other's results.

Bamberger (2000) suggests integrated quantitative and qualitative survey research leads to in-depth study and clarity in social related investigations. Such kinds of integration are needed because of the wide range of data needed to convert into effective communications. However, it is understood that such attempts may induce the final outcomes which are considered to be a mixture of qualitative and quantitative survey research and hence require a knowledgeable research team to analyze them. The downside of integrated survey research is that it is also time-consuming, labour-intensive and expensive. Further, the integrated survey research is contemporarily widely accepted academically. However, in social related surveys, such survey research is necessary to obtain deeper understanding and address wider social issues.

Henning (2008) and Matveev (2002) highly appraised the integration of quantitative and qualitative survey research as it may produce a different focus of results where certain missing quantitative data will induce further qualitative research that will again prompt further quantitative questions. Such a cycle of analysis implies that the two types of survey researches play off each other. According to Olsen (2004), quantitative and qualitative research can be mixed by adapting the triangulation method. The pluralism of methodologies e.g. mixing the use of survey data with interview, is a more profound form of triangulation (Carter & New, 2003). The triangulation research provides a three polar positions in research methodology (Sayer, 1992). The realism is chosen whilst the other two positions including constructionism (interpretivism) and empiricism can also be adapted for selected insights and techniques. Olsen (2004) argues that the triangulation approach for survey methodology must include the following three points:-

- 1 The Questionnaire should be set up with in-depth qualitative inquiry that is known as the pilot survey (Blaikie, 2000);

- 2 All questionnaire surveys should be set up after a period of examining the relevant literature (Bulmer & Warwick, 1993); and
- 3 Survey data should always include categorical and qualitative data (Mikkelsen, 1995).

This integrated survey research design provides an academically accepted methodological pluralism to explain truth, facts and reality in three polarized triangulation. This integrated survey research approach is therefore appropriate to address the research questions posted in this thesis.

3.2.4.4 Integrated Research Approach – Action Research & Case Study

There has been an increasing demand in the contemporary research to integrate action research with case studies (Johnson et al., 2007). The International Council for Science (2008) ["ICFS"] suggests that a pilot case study is important to combine experience and knowledge gained in diversified areas. Further ICFS also recognizes the sensitivity of experiences and views are crucial elements to the in-depth understanding of the case study. Mumford (1985) and Lyytinen (1987) both call for a "total" solution that is action-centered including interdisciplinary and participatory research because where sufficient rich data can be obtained. The results and validity are better than empirical studies.

The prime issue of the integrated methodologies, as suggested by Campbell and Fiske (1959) is to ensure the explained variance is the result of the underlying phenomenon. Bouchard (1976, p. 268) further argue that the joint findings from mixed methods "enhances our beliefs that the results are valid and not a methodological artifact". According to Webb et al. (1966,

p. 3), (who are credited they have first coined the term '*triangulation*'), "Once a proposition has been confirmed by two or more independent measurement processes, the uncertainty of its interpretation is greatly reduced. The most persuasive evidence comes through a *triangulation* of measurement processes. If a proposition can survive the onslaught of a series of imperfect measures, with all their irrelevant error, confidence should be placed in it. Of course, this confidence is increased by minimizing error in each instrument and by a reasonable belief in the different and divergent effects of the sources of error."

Denzin (1978, p.14) recommends the use of mixed-methods of triangulation because "the bias inherent in any particular data source, investigators, and particularly method will be cancelled out when used in conjunction with other data sources, investigators, and methods; and the result will be a convergence upon the truth about some social phenomenon". Even though convergence, inconsistency, and contradiction outcomes can be derived from triangulation, Denzin believes that the researcher is able to build-up satisfactory explanations to the observed social phenomena. Sieber (1973) starts from a different angle, later strengthened by Rossman and Wilson (1985), and suggests that it is better to combine various research methods as the combined research method is considered to be effective at the research design, data collection and data analysis stages of the research process. Greene et al. (1989) and Greene & Caracelli (1997) concluded through examined published research that there are five broad rationales of mixed methodological studies including

- (a) *triangulation* – seeks convergence of results from mixed methods studying the same phenomenon;
- (b) *complementarity* – seeks elaboration, enhancement, illu-

stration, clarification of the results from one method with results from the other method;

- (c) *development* – uses the results from one method to help inform the other method;
- (d) *initiation* – discovers paradoxes and contradictions leading to a reframing of the research question, and
- (e) *expansion* – seeks to expand the breadth and range of inquiry by using different methods for different inquiry components.

Johnson et al. (2007) summarize that there are three research paradigms including qualitative, quantitative and mixed methods research that are all co-existing and thriving. Further they also conclude mixed methods include issues and strategies surrounding methods of data collection (e.g. questionnaires, interviews, observations), methods of research (e.g., experiments, ethnography), related philosophical issues (e.g., ontology, epistemology, axiology), and most importantly include assumptions, principles, and values of methodology and practice-related issues as parts of the research paradigm (Johnson & Onwuegbuzie, 2004; Morgan, 2006).

Design of Integrated Research Approach: Case Study and Action Research

When designing a mixed study, the research should strategically combine, with an open view, mixed approaches including their synergy and non-overlapping weaknesses. The synergy should include all information relevant to the study and include the above mentioned five rationales of Greene et al. (1989) (i.e., triangulation, expansion, complementarity, development, and initiation). Furthermore researchers should try to minimize potential weaknesses arising from integration of methods.

Johnson et al. (2007) suggest designing studies should diverge as needed and converge as needed, in a way to ensure viability and usefulness of the overall results. Without doubt, integrated methods research is a challenge but considered fully appropriate for this thesis to undertake. Greene (2007) offers four useful domains for mixed methods research including

- (1) philosophical assumptions and stances (the width);
- (2) inquiry logics (when, where & why);
- (3) guidelines for practice (how); and
- (4) sociopolitical commitments (orientation).

Base on the ontological, epistemological, methodological and pluralistic philosophical approaches as discussed above, the triangulation rationale of mixed methodological studies for the research described in this thesis was designed to include the integration of action research and case study. The action research described above refers to the participatory action research method with the integration of first-person complete participation and active participation as mentioned in Section 3.2.4.1. The integration of action research and case study is based on the rationale of *triangulation*, a combination of methodologies studying the same phenomenon. This integration achieves the final aim of realism in a single definitive social world and also to achieve dual objectives including the knowledge research, that is to achieve generalized knowledge that can help to create desired situations through constructionism (Romme, 2003; Collins et al., 2004), and the pluralist research, that is to interact with an organization to diagnose findings to gain knowledge through empiricism (Brydon-Miller et al., 2003; Dainty, 2007).

Data collection of integrated research approach

The Integrated research approach including both case study and action research adopts open-ended interviewing, observation, participant observation, and analysis of responses to open-ended items on a survey questionnaire (Kaplan & Duchon, 1988). For active participation and complete first-person participation research, data collection is the critical issue as it involves ethical considerations. There are seven basic principles of particular relevance to the ethics of data collection process that involves human participation including respect, dignity, risk-benefit analysis, informed consent, confidentiality, security and fairness (Boyden, 2000). The integrated research approach involves both qualitative and quantitative approaches and requires that researchers should keep notes on all interviews, observations and processes of activities executed by other team members as "background information" for the use of future analysis.

Interviews and Observations

In active participation, the researcher observes and participates with all participants whilst in the case of first-person complete participation, the researcher engages in all activities as top management and earns knowledge through mistakes in a more effective manner and able to observe the "feeling" of all participants (Arieli et al., 2009).

Outcomes and Findings

The integrated research method, (inclusive of case study, first-person complete participation and active participation methods), links up quantitative and qualitative methodologies. Any outcome or finding that derives from an unsupported empiricist position is antithetic because of the dualism of qualita-

tive epistemology versus quantitative epistemology (Silverman, 1997). However the integrated research method engages a methodological pluralist approach that poses a realist position (Modell, 2009). It is argued that the methodological position that results from constructionism is in fact empiricism because of the intention to gain understanding of the real world (Stahl, 2003). From a pragmatic view point, empirical research represents scientific rationale (Lyytinen & Hirschheim 1988). Therefore, there is no contradiction between constructionism and empiricism as both accepts the need another social construct in a collective meaning i.e. means to facilitate discourses and develop new narratives. After all the foundations of social constructions in both practical and theoretical research will gain in importance (Benbasat & Zmud 1999) even though openness and ethical issues requires to be always bear in mind (Dawson & Newman 2002). However, research must be understood as the means of producing and distributing to the shaping of reality (Introna 1997, 167) where moral and social responsibilities are the core. *Triangulation*, considered a research device that enhance the credibility and persuasiveness of the integrated research method (Denzin, 1970), plays an important role as it tests the validity of findings obtained from case study, first-person complete participation and active participation research methods.

The application of social focused based on the integration of action research and case study research is growing. It is argued that the use of the integration of case study and action research in the research design is appropriate, intellectual and practical with the intention of this thesis to provide informative, complete, balanced, and useful research results that match the research questions and provide the best research findings and outcomes.

Overview of the Research Design

The research design of this thesis was set-up as shown in Fig. 3.1 – an Integrated Research Approach Design Diagram for Case Study & Action Research.

The rationale for the steps in this integrated research design is as follows:-

1. The conceptual framework reviewed the philosophical considerations to the topic of interest. After setting up the conceptual framework, a pilot survey was executed to verify the conceptual framework was applicable.
2. Based on prime focus of the topic of interest, research questions were set to meet the aim of the research and ensure that it was practically feasible. A preliminary diagnosis was also needed to check the research questions could be matched.
3. The research design was set-up based on the initial solution concept. The research design to consist of the following steps:-
 - (a) define the intended methodologies corresponds to the problems where solutions may be applied and their relevant applicable contexts;
 - (b) review the research approaches adapted with the roles applied and standpoint of the researcher;
 - (c) consider the need of integrating multi-view-points;
 - (d) consider the difficulties of underlying causes of the phenomenon;
 - (e) select the research domains that can explain the causes; and
 - (f) evaluate the research design against the applicable domain.

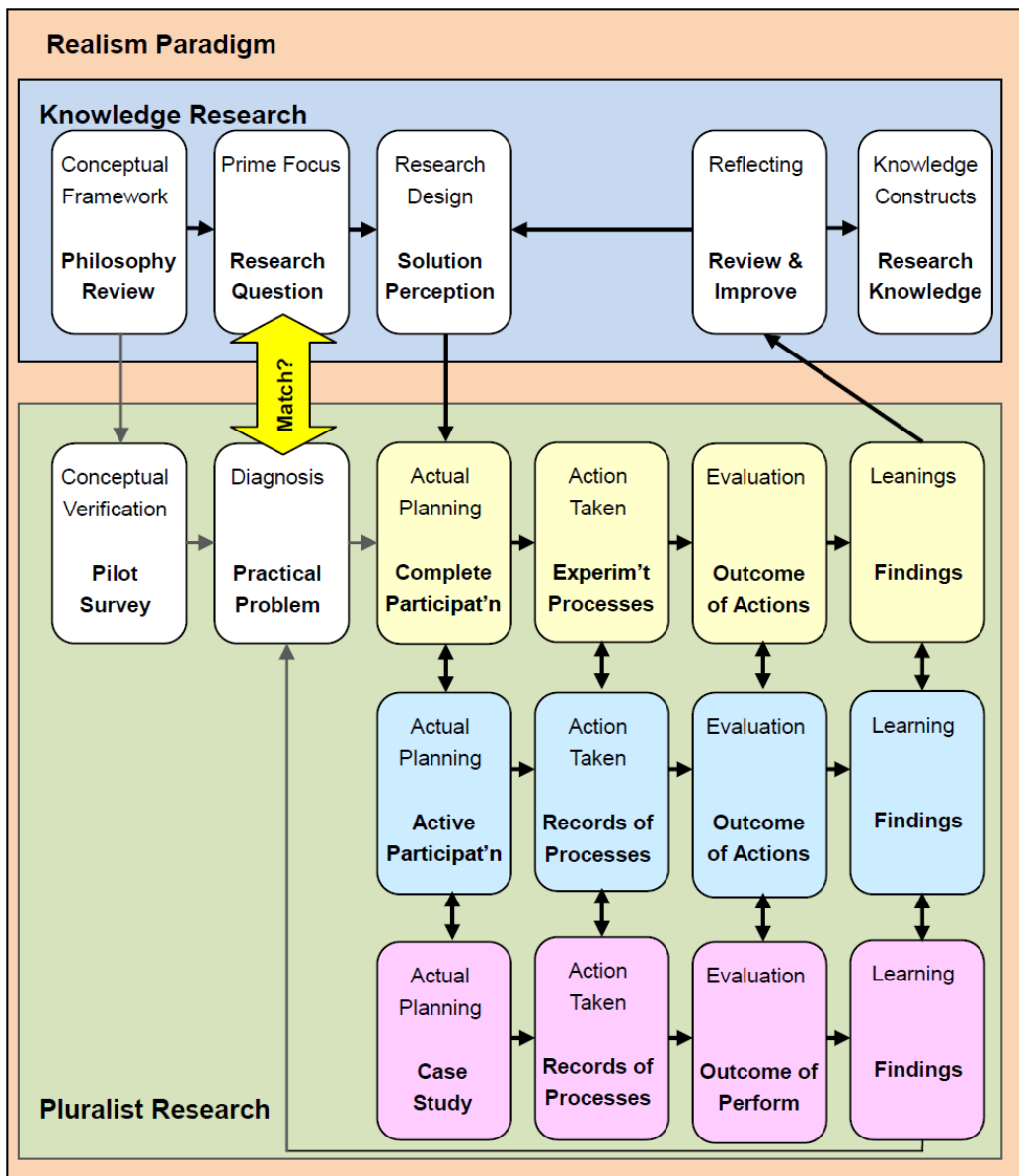


Fig. 3.1 :- Integrated Research Approach Design Diagram for Case Study & Action Research

The research design concept was justified through the practical stream of knowledge gained applying a mixed study, strategically integrated research, with an open view, inclusive of case study, first-person complete participation action research and active participation action research as discussed in Sec. 3.2.3.

4. Action Planning was adopted to identify and develop a tailor-made specific research design including integration

of three different methods: First-person complete participation, active participation and case study.

5. Action taken diversifies into three line each cope with its corresponding methodology:-
 - First-person complete participation method intends to have researcher work as participants and able to examine the first hand insight information of decision-making processes.
 - Active participation method intends to have the researcher works with participants, active participation research and process through necessary actions.
 - Case study integrates both collected quantitative and qualitative data to understand and explain the processes and outcome of a phenomenon under investigation
6. Evaluating the process and outcome of the research methods and execute a validity check to avoid significant incongruity along the path of the intention.
7. Review learning at the end of each study and evaluate the outcome to see whether this matched with the conceptual framework.
8. The pluralist research approach was adopted for gathering knowledge. This was achievable through the integration of various research methods. The application of the pluralist research approach is demonstrated from step 4 through to step 7. The reviewing of learning needed to go back to step 3 to amend the diagnosis or re-visit/re-define the prime focus i.e. research questions where necessary (action-reflection-action process).
9. Reflecting – reviewing the integrated research outcomes through action research and case study and check whether

they were in line with the polarized realism, interpretivism and empiricism by means of triangulation.

10. Knowledge constructs were analyzed to ensure experience and knowledge gained from practice and the through structured pluralist approach matched with the theory or resultant effects in the construction industry.

In summary, the research designed is based on the following:-

- identifying the current thinking of Hong Kong contractors with respect to expanding their construction activities overseas – based on pilot and follow-up survey of Hong Kong contractors; and
- critically assessing the overseas expansion experience through a case study to a large Hong Kong based Contracting Organization – based on integrated research approach inclusive of case study, first-person complete participation and active participation methods.

3.3 Research Methods Application - Survey

This research explored appropriate models of international business development through studies of Hong Kong construction contractors at the pre-contract stage. It was therefore necessary for the research to reflect an understanding of the changing Hong Kong construction market and the contractors' changing strategy, decision making process and performance during their business development. A combination of qualitative and quantitative research together with practical participation was adopted to provide an insight of the organization perspectives, performance and associated social phenomena.

The research methods adapted for this thesis includes a case study and surveys. Each of these research methods and their application is now discussed:-

3.3.1 Surveys

The conceptual framework affects Hong Kong contractors in commencing their overseas business development operations could be from, but not limited to, the following:-

- the change of social environment;
- changing company financial situation;
- technical advantage;
- local market situation;
- turnover expectation;
- resources situation;
- attractive national policy;
- changed company goals,
- overseas market attraction; and
- relationships.

In order to understand the evolution process of Hong Kong contractors changing from local contractors to becoming an international contractor, structured surveys were requested to be carried out to record their strategic or operational changes associate with time. Further, the results of the surveys needed to be bench-marked against a Hong Kong based construction company which has successfully expanded its business to overseas markets (refer to separate case study). The findings of these surveys were required to understand the Hong Kong contractors in their strategies of developing overseas construction markets. Through the surveys, it was possible to review the strategic, collaborative and risk management practices of Hong Kong contractors and ex-

plore an appropriate model for managing international business development at pre-contracting stage.

The objectives of the surveys were to study the basic questions of Root (1978), which is in line with the research questions of this thesis, for companies intending to expand to international markets:

- Why go international?
- How to compete with local firms who have apparent advantages in the local market?
- What are the advantages of a foreign company in the new market?

The survey also studied the behaviour of the contractors and observed whether they were operating based on the theory of Child (1994) where the enterprise shall work in synergy with foreign enterprises expecting to have a higher chance of success or self-perform expecting better direct control. The surveys were also designed to understand the cultural difference between the target country and Hong Kong to observe the importance of cultural impact (Martin, 1998; Hofstede, 1980; Li, 1999; Kohn, 2001; Negandhi & Estafan, 1965; England 1987; Miles, 2000; Smith, 2001). Structured questionnaires and face-to-face interviews with the top management of selected Hong Kong construction companies were used in mixed method studies to generate confirmatory results despite differences in methods of data collection, analysis, and interpretation (Harris & Brown, 2010). Recommendations were provided for reflection and future reference of Hong Kong contractors' overseas business development.

The surveys of Hong Kong contractors adopted the qualitative methodology, based on a descriptive research approach (Healy & Perry, 2000 and Harris, 1998).

3.3.2 Hypothesis and Bases of Surveys

The surveys were based on, but not limited to, the following:-

- a. the overseas construction business development of Hong Kong contractors relates to social/economical influence;
- b. large, medium and small size contractors in Hong Kong; the pilot survey includes also international contractors;
- c. selected contractors, where their senior executives were willing to be interviewed;
- d. the assumption that international contractors are well experienced in formulating overseas business development models and the survey reflects only their knowledge in overseas business development;
- e. the intention was to find out what these Hong Kong contractors *could* do and what they *wished* to do;
- f. the knowledge of overseas business development is a trend of globalization and may be considered as a way forward for the survival and continue development of Hong Kong contractors;
- g. The questionnaire is set based on selected sampling with normal sample distribution and the level of measurement is interval scaled; and
- h. the surveys were based on standard questionnaires through interview (one on one); respondents were selected from only the top management of organisations, and some questions inviting respondent's personal comments led to diversified answers.

3.3.3 The Pilot Survey executed in 2004

The pilot survey was undertaken to investigate the managerial aspects of enterprises located in Hong Kong and to assess the importance of the risk and tender management of companies currently carrying out or intending to carry out construction activities overseas (including Mainland China). The questionnaire, reproduced in Appendix F, was sent to the selected construction enterprises, including selected international contractors, working in Hong Kong. The questionnaire was sent in advance of the interview. A pre-arranged face-to-face interview was subsequently conducted in a convenient place agreeable to both interviewee and interviewer. The term "overseas" in the initial survey includes Greater China and countries outside Great China.

The pilot survey questionnaire comprised five sections:

- **Section A** was designed to document the general information of the company being interviewed and to establish that the company has covered overseas activities in their operations.
- **Section B** consisted of 8 groups of entry concerns. Respondents were requested to assign what they believed to be the degree of importance of these entry concerns. In addition the survey also covered open discussion on various topics in order to understand the decision making process of the company without touching on sensitive internal procedures which may be considered confidential information.
- **Section C** intended to understand the risk management system of the company and check whether any specific methods were adopted.
- **Section D** was to gain a general understanding of the tender management system adopted by the interviewed company.

- **Section E** contained information of the respondents. Respondents were given the choice of whether they were quoted for their comments and had their status published.

Sections B, C & D were considered as the core issues for overseas business development in respect of entry mode approach, risk management and also tender management that are part of the main research areas of this paper. The respondents were requested to indicate the extent to which each of the questions best described their view and the senior management thinking of the interviewed company using a seven point Likert scale to measure responses for some of the questions (where 1 represents little or no importance and 7 represents most important). The results were analysed using descriptive statistics so as to facilitate discussion of the findings. The representative elements of each research interest were identified and defined (Bell, Vince & Costigan, 2002).

All the questions were set to check the views of the respondents. The responses to these questions are considered an accurate statement of the strategic direction of the company as the persons interviewed were all senior executives of the companies.

The questionnaire contained questions adopting the structured interviewing methodology (Fontana & Frey, 1994). The interviewee, a member of the top management from the surveyed organization, was requested to answer the questionnaires. In order to ensure in-depth answers, all the interviews were conducted in Chinese or English as appropriate. Apart from the infrequent open-ended questions set in the questionnaire, the interviewer controlled the interview in a standardized and straightforward manner. However, the face-to-face interview was designed with the intention to stimulate broader discussion of the themes in order to:

1. ensure that the interviewee had the correct understanding of the questionnaire responses;

2. capture potential for management or strategic issues;
3. ensure that answers are truthfully responded to; and
4. observe any emotional dimension of the respondent, and reduce subjectivity and observer's bias from the interviewer.

3.3.4 Follow-Up Survey carried out in 2008

After the initial survey conducted in 2004, the Hong Kong construction industry market experienced further shrinkage between 2004 and 2007. Interest in the development of overseas construction business increased at the beginning of 2007. Hence a follow-up survey was undertaken to serve the dual of purpose to find out how Hong Kong contractors were facing the challenge in developing their construction business to overseas market(s). The follow-up survey questionnaire is shown in Appendix H. The process adopted a similar protocol to the first with a structured questionnaire and face-to-face interviews. However, only Hong Kong contractors were surveyed in the second survey. The intention was to maintain the same list of selected companies as the pilot survey; but this was not possible owing to unavailability of some of the interviewees. The follow-up survey explicitly outlined the difference among Hong Kong, cross-regional (Macau & Mainland China) and overseas markets. The critical issue here was that all companies were having to re-consider their development strategy, risk management, human resource consideration etc and adopt a different approach from their usual and traditional business modes in Hong Kong.

The questionnaire for the follow-up survey of Hong Kong contractors in 2008 pertaining to entry mode, strategic decision making, human resources consideration, risk & tender management as well as expectation of those contractors, comprised five sections:

- **Section A** was designed to document the general information of the company being interviewed and to establish that the company has covered overseas and/or cross-regional activities in their operations.
- **Section B** documented company objectives, entry concerns, the decision-making process, human resources concerns and communication concerns. Respondents were requested to assign a degree of importance of these concerns based on a seven point Likert scale. There were also descriptive questions for face-to-face interview discussion, to understand the decision making process of the company without letting the interviewee think that the interviewer is trying to spy on sensitive topics considered confidential by that company.
- **Section C** was designed to understand the risk management system of the interviewed company and check their application in risk management in overseas and/or cross-regional business development.
- **Section D** obtained a general understanding of the interviewed company in their expectation of the Hong Kong construction industry and observes their thinking, ranked in importance as requested for Hong Kong, cross-regional and overseas market.
- **Section E** sought information of the respondents and was the same as the pilot survey questionnaire.

Sections B & C were both considered crucial for overseas business development of Hong Kong contractors in respect of their entry mode approach, human resource consideration, risk and tender management that relates to the main research areas of this thesis.

The format of the follow-up survey questionnaire was the same as the pilot survey adopting a “seven point Likert scale” followed by face-to-face interviews in the same protocol as pilot survey.

3.3.5 Survey Data Collection

The writer strongly believed that it would not be appropriate to send out the questionnaire to all Hong Kong construction companies as the response may be biased if the responses to the questionnaire, even if provided by senior management, may not be well thought through as they may not understand the questions fully. The author fully recognized the importance of the choice of sampling that is powerful determinative factors (McMahon, 1996; Miles & Huberman, 1994). However, it was decided to carry out face-to-face interviews with senior members of selected Hong Kong contractors who are willing to provide their best and honest opinions. Even though the sampling was not random, by means of careful selection, the result is believed to reflect and represent the current thinking of Hong Kong contractors.

The selected companies that completed the pilot and follow-up survey were as follows:-

Pilot survey in 2004	Follow-up survey in 2008
Kwan Shing	Kwan Shing
Good Mind	GME Group (Good Mind)
Leader Construction	Leader Construction
China State (HK)	China State (HK)
Shui On Construction	Shui On Construction
Lam Construction	Lam Construction
Hsin Cheong	Hip Hing Construction
Linkforce	Chinney Construction
Sun Fook Kong	Wang Lee Construction
Shinryo (HK) (Japan)	Chun Wo Construction
Kumagai Gumi (Japan)	Chevalier Civil Engineering
NECSO (Spain)	Build King Holdings
Penta Ocean (Japan)	Gammon (declined)
Bilfinger Berger (Germany)	Sun Fook Kong (declined)
CITIC Guo Hua (China)	Hsin Cheong (declined)
	Linkforce (not available)
	Shinryo (Japan, declined)

Interviews with senior management (in the capacity of director or above) of the surveyed companies were carried out individually through advanced appointment. Venues for the meetings were either at the interviewee's office or at a location convenient to the interviewee and the interviewer. Each interview was expected to take about 40 minutes. However, actual interviews ranged from 40 minutes to 90 minutes pending on the response on the descriptive questions. The researcher observed that the follow-up survey reflected an increasing number of Hong Kong contractors becoming more interested in overseas business development.

Most of the interviewees of the 2004 pilot survey and the 2008 follow-up survey were from top management. Access to senior management was secured mainly as a result of the career status of the researcher. The equal status of interviewer and interviewee made such senior management discussion possible. However, it has to be stressed that researcher conducted all these interviews with extreme care to ensure that:-

1. no respondent felt threatened by the interviewer preying upon their confidential information;
2. all interviewees were interviewed with respect, fair and open manner;
3. the interviews were conducted in both academic and business-like manner; and personal relationships were only the tool to make possible the interview;
4. the discussions were recorded in an analytical and objective manner even though they may still contain certain subjective elements; and
5. the respondents were encouraged to provide, to the best of their knowledge and belief, their honest insights and opinions on overseas construction business development.

3.3.6 Survey Outcome Analysis

Data analysis (Miles and Huberman, 1984) comprises four linked components comprising: data collection, data reduction, data display and conclusions, was adopted in the survey of this thesis. The interactive model is shown in Appendix J. The design of the research is seen as analytic. Choices of conceptual framework, of research questionnaires, of samples, of the research definition, of the research hypotheses, and of the instrument are essential parts of the data analysis. These choices have a focusing and bounding function, ruling out certain variables, relationships and associated data, and selecting others for attention. Qualitative designs, as Preissle (1991) argued, are not copyable, off-the-shelf patterns, but have to be custom-built, revised, and “choreographed”. Further the “loose” analysis design chosen allows for the super-complex situation involved, and consequently the intent of the result is more exploratory and descriptive in nature.

Preliminary analysis was carried out after the initial survey so that unnecessary errors could be avoided. Amendments in the questionnaire and interview schedules were adopted and reflected a better understanding of the settings and thus heightened the validity of the study. A shortcoming of the initial survey analysis was the lack of data collection in respect of significant current and late breaking events in the industry as they affected the interviewees; and further research on such topics was, and is, necessary.

The results are analysed using descriptive statistics. The study analysis used Microsoft Excel to calculate the results. Basic descriptive statistics will be shown in percentage, tables, charts and graphs as deemed necessary and appropriate.

The findings of the initial survey were compared with the findings of the follow-up survey. The comparison allows the readers to notice the difference in the evolution of Hong Kong contractors in

overseas/cross-regional business development subject to differences in entry mode, strategic planning, decision making process, human resource concern and risk/tender management that may exist between them.

3.3.7 Survey Outcome Constraints

The main difficulty of the survey analysis was to find out the realistic perception of Hong Kong contractors as the insight or background reason could be confidential. However, there are obvious strategic planning changes for some of the contractors, regardless of their size, for overseas business development. It was noted that the Hong Kong Trade Development Council had carried out several business promotion missions to the Middle East between 2006 and 2008. The influence of such missions was arguably the primary reason for some Hong Kong contractors to consider going overseas. It was noted that the radical market changes occurring in Hong Kong, Macau, China, India and Middle East were making the study more difficult; as people's knowledge and perception of the latest development in global markets was also changing radically at the present time.

Large-scale sampling of the Hong Kong contractors was not practicable owing to time, cost, and resource issues. Furthermore, the surveys as undertaken were considered more appropriate and valid with face-to-face interviews with top management of the selected contractors as their comments and responses are representative of the true thinking of Hong Kong contractors. More widespread and non-focused studies of other contractors with less senior representation would have resulted in 'skewed' research findings that may not have been considered relevant for the purposes of this research.

The interviewing of senior management was considered problematic because access to, and the time available from, top manage-

ment was a key factor. Top management's restricted time schedule has reduced the total number of companies studied. The survey touches on respondents' core practical management problems and foundation concerns. Some of the respondents expressed their honest concerns about giving their true opinion even though it was explained to them that no name would be mentioned in the study report. In fact, the survey records several respondents who refused to provide responses to several of the descriptive questions. The reasons behind this lack of response were:

- (1) the interviewees' reservations in disclosing commercially sensitive information;
- (2) their subjective opinion may be in conflict with the organizational culture; and
- (3) their understanding and interpretation of the emphasis of this study.

The structured methodologies adopted may by some be considered a restraint. As Huberman and Miles, (1994), argued, the maximization of constructive and descriptive contextual validity may lie in the direction of minimally pre-designed instrumentation.

Other restraints of the study could have arisen from the wording of the questionnaire; all such survey documents have the problem of a residue of ambiguity. However, supplemented by the structured face-to-face interview both parties can address the core discussion directly, focusing on both clear and perceived problems. Any misunderstanding can be clarified during the discussion. The best outcome is for the interviewer to understand the respondent's world and, if possible, stimulate his responses. This was the basis for the research.

In this research there is also a constraint on verification of the survey. Here, other than the specific case study of one local

company there is virtually no prior treatise, within the scope of the writer's investigation. To the best of the researcher's knowledge there has been no similar review of the Hong Kong construction industry, there is no appropriate database that can be adopted or offered for comparison. The findings of the surveys and study can only be checked and verified by personal scrutiny and reference to professionals in the industry.

3.4 Research Methods Application - Case Study of a Hong Kong based Contractor

The case study focuses and investigates, in the pre-contracting stage, the competitiveness, performance, decision making processes and relevant social/economic environment of the selected Hong Kong contractor for their overseas construction development activities from a contractor's perspective. Through such study, it is expected to obtain a primary aim of establishing a structured approach which will assist Hong Kong contractors to re-define their business development plan when expanding overseas business. Furthermore, the research augmented theories studied in the literature review in order to make recommendations on the way forward for Hong Kong and international contractors.

In order to carry out in-depth study of a large Hong Kong based construction company and understand its strategic planning, performance and decision making processes, and as discussed in the previous sections, the case study adopted the integration research approach inclusive of first-person complete participation, active participation and case study methods as the research methodology for this thesis.

3.4.1 Integrated Research Approach - Action Planning

It was necessary to identify and develop a tailor-made specific research planning for the integrated research approach including the three different methods: first-person complete participation, active participation and case study. The researcher engaged in these

different research methods based on different levels of management depth and investigation nature in the study. This is summarized in Table 3.6:-

Table 3.6: Summary of Integrated Research Approach – Action Planning

Level of investigation	Applied Method
Strategic planning & decision making processes level	Complete Participation
Pre-contracting business development execution level	Active participation (participant-as-observer)
Case study – organization performance & social / economic environment level	Complete Observer

Each of these three methods and the engaged position of the researcher is now discussed:-

3.4.2 First-person Complete Participation Research Method

This method was adopted based on the research consideration justification. This determined that:-

- the researcher engages in all activities as the top management to earn knowledge through mistakes in an effective manner and able to observe the “feeling” of all participants (Arieli et al., 2009). As Lancaster (2005, p. 103) critically points out, full participant observation has produced some of the most useful and important research studies within the field of observational research;
- the first-person complete participation research involves ethical considerations where particular attention needs to be paid to the ethics of data collection process of the researcher in terms of respect, dignity, risk-benefit analysis, informed consent, confidentiality, security and fairness (Boyden. 2000); and

- the downside of such research method is also noticed that self-conscious of the researcher should be avoided.

The researcher was employed as an Executive Director and Vice-President of the Hong Kong based construction company being studied. He was responsible for overseas business development. The complete participation allowed the researcher, to enjoy the benefit of having the opportunity to completely participate, as a first-person, in the full range of strategic planning and decision making processes during the business development process construction processes. Such complete participation in the upper level action research enabled the researcher to acquire knowledge through trial and error during the processes of business development, as well as then insight “feelings” of the top management.

3.4.3 Active Participation Research Method

This method was adopted based on the research consideration justification discussed in Section 3.2.4.1. It was understood that:-

- the researcher became more involved with the insiders' core activities with close social contacts, which helped to understand the details of the social environment of studied case;
- the researcher and participants of the organization work together to study the common agreed area of activities;
- the researcher and the participants acted, observed and recorded the processes as their gained practical knowledge;
- the researcher, together with all participants of the organization actively, engage with an open mind and a high level of commitment in their appropriate position to participate and propose solutions in order to gain knowledge;

- domestic and experiential knowledge and information were collected, analyzed and shared with the outcomes draw to new development direction;
- the researcher adopted appropriate measures to drive and promote the organization's overseas business development processes.
- The researcher and all participants were able to contribute to theory and knowledge along with achieving practical results particularly during the complex and drastically changing environment; and
- the researcher and the organization were able to gain knowledge and experience through the process of problem solving and contribute the transformation of the organization.

The researcher joined in the research as an active participation research and a participant-as-observer. Through such active participation, the researcher was able to understand the impact of the set strategies and decision processes, observe through active participation, to monitor and become involved in the development progress, embrace problems encountered in the entry activities, risk management, ITC and also facilitate collaboration with local alliance partners in an alien environment. Hence the researcher was able to experience the "spiral of steps", each of which is composed of a circle of planning, actions, and fact-finding about the result of the action Lewin (1946).

The researcher was able to participate in this research in totally different approach inclusive of complete participation and active participation because the organizational structure enabled him to act in such a way. The executive director's position enabled the researcher to engage in strategic planning and decision making processes with his complete participation. Furthermore he was able to engage as active participation in the execution of overseas

business development as the organization had set up a full team, i.e. the Overseas Business Development Department led by a department general manager, to take up the execution of this part of the company's strategy. The two positions do not contradict each other but were mechanically linked to provide supplementary information to this research.

Within the department the participants carried out focus group discussions where real and appropriate ideas and opinions were raised from industry practitioners. The transformation in the width and depth of knowledge gained and the action to both the organization and the researcher was the targeted of the research. Furthermore, validity was also achieved through the optimized effects of such integrated participation.

3.4.4 Case Study Method

The Case Study method was executed to carry out a holistic and in-depth investigation to the issues of the organization when engaged in overseas business development. The case study was carried out in a systematic manner and the findings reviewed and validated. The case study adopted a pluralist approach integrating complete participation and active participation research approaches. These methods enabled the researcher to investigate the same target but in different levels of dependent variables. The case study method was selected to enable observation of the width and depth of the related social and economic environment together with the performance of the organization. This allowed the researcher to gain a holistic and objective view of phenomenon or events and collect data from various sources.

3.4.5 Case Study Data Collection

The case study of a Hong Kong based construction company in its overseas business development was designed to collect information by:-

- (1) gathering information through complete participation action research during the strategic planning and all relevant decision making processes occurred in the Hong Kong office as well as from various action taken sites i.e. India and UAE;
- (2) identifying information for strategic planning and decision making processes are collected and recorded in report form through first-person participant;
- (3) collecting information through active participation from the researcher and participants on their findings and understanding of the company's processes for overseas construction business development; and
- (4) collecting information through complete observation on information of the company's performance, social or economic environmental information through third-party information collection.

The collection of data was systematic and controlled. The participants were members of the overseas construction business development team. They occupied positions at various levels within the organization. Specific permission was been granted by the Company for the use of the data collected in this research. The participants understood their role as co-researchers of this study. Throughout the study, they became more interested and experienced in learning about overseas business development. They became highly motivated in their collection of data and contribution of their findings to the research base. These participants, or co-researchers, were considered as "reflective

practitioners” as they were able to achieve more ownership of the evaluation process through self-identification, self-solving, following through, contribution and review in the process of the development. The researcher ensured that the case study was critically collaborative, reflective, accountable, self-evaluative and participative.

3.4.6 Case Study Outcome Constraints

The mentioned case to a Hong Kong based construction company comprised a field research approach where a balance was sought between the theoretical and practical interests of the researcher and all participants. It was recognised that the study of the company may have collected biased data based on the feelings of the participants. In addition, personal, professional and political influence may be imposed to all participants. According to Cornwall & Jewkes (1995), this is unavoidable.

The researcher therefore exercised extreme care to his research position in the three different levels of engagement:-

- (a) complete participation in strategic planning and decision making processes;
- (b) active participation in pre-contracting business development execution processes; and
- (c) complete observer in company performance and surrounding economic and social environment.

Another major constraint is that the information gathered through this case study may be considered its sensitivity to the company at that period of time. Even though specific permission from top management was granted to expose certain information for the purpose of this thesis, the researcher still needed to handle the

data collected carefully in order to respect the confidentiality of the company under study.

The timescale in carrying out the case study is also a constraint as the process of the overseas business development of the studied company extends and continues in a very intensive way. The researcher, participants and other related members of the development team were fully engaged in day-to-day practical development activities. Hence, detailed data collection, in-depth review, evaluation and findings were mostly summarized after the event.

3.5 Conclusion of Research Design and Methodology

This chapter has studied the philosophical consideration, research selection, research selection and research application. The research design and methodologies adopted in this thesis is as shown in the following Table 3.7:-

Table 3.7: Summary of Research Design and Methodology

Research Design	Research Method
Literature Review	Reading of relevant theories, journals, texts and etc.
Initial Survey to HK contractors	Questionnaires & face-face interview
Follow-up Survey to HK contractors	Questionnaires & face-face interview
Case Study of a HK based contractor	Complete participation, Active participation & Case Study

The case study of a Hong Kong based contractor integrated first-person completely participation, active participation and complete observatory bringing together a set of underlying methods that underline the importance of social and collective processes. This research approach was considered as the most appropriate approach to tackle the research questions relating to this thesis where there is drastic organizational

change, engagement of a sensitive human nature relating to basic human needs, anxieties, fears, and impact of alien culture. However, the researcher is minded that a holistic, 'ideal' situation was not feasible given the practical implementation of the study. Hence the study was aimed towards 'sense-making' and 'critical reflection' of all experience and knowledge gained. The results from the Case study, combined with the survey data collected are discussed in Chapter 4, 'Data collection and Analysis'.

4. Data Collection and Analysis

4.1 Introduction

This chapter comprises details of the data collection and analysis undertaken for the research. These data collection and analysis were collated in four separate studies. Case Study 1 comprised a study of Hong Kong based international contractor who is currently developing its construction business to overseas markets. The study focuses on their overseas construction business development process including their major concerns and experience during their preliminary exploration of the overseas markets in particular review their market entry decision-making process. The study was followed by a follow-up study trying to uncover the insight of their practical overseas business development experience including their strategic planning process, risk management and tender management of the studied Hong Kong based international contractor. Concurrently a pilot survey of Hong Kong based construction contractors was carried out. This survey, undertaken by survey interviews of senior construction industry executives, was designed to put into context the findings in terms of the approach to international development that were being adopted by the construction contractors in the current economic market of Hong Kong. The pilot survey was followed by a follow-up survey of Hong Kong construction contractors with the intent to put the findings into the context of the changing economic climate and its impact to the strategy being adopted by Hong Kong construction organizations.

The two studies of a Hong Kong based construction organization and the two surveys of Hong Kong construction contractors provide supplementary information regarding the Hong Kong construction organizations in their perception and planning in developing overseas construction business. Through these studies, it is expected that the data collection and analysis will provide a sound bases for the formulation

and structure of guide line for contractors who intend to expand overseas construction market.

4.2 Case Study 1 – Study of a Hong Kong Based International Contractor

4.2.1 Background

The aim of this case study was to study a construction company in developing its construction business to overseas markets. All enquiries and findings were to identify the facts critical to strategic planning and decision-making processes. The results were studied as a reflection and self-evaluation of its overseas business development operations.

The study of the overseas business development of a Hong Kong based construction company was designed to:

- (1) gather information through action research in the Hong Kong head office together with overseas business development processes;
- (2) collect data by means of first-person complete participation by the researcher and active participation by the researcher together with co-researchers (participating members) on their findings and understanding of the company's processes for overseas construction business development;
- (3) gather information adapting complete observatory case study methodology;
- (4) identify the constraints imposed on the research;
- (5) identify the importance of the study in various areas;
- (6) determine the influential factors through action research; and

(7) examine the crucial areas of the company for model building.

The study was conducted in a planned and controlled manner. The co-researchers were members of the overseas construction business development team motivated in their contribution to this research on comparing the historical experience of the company under study. The process of development of “practical knowledge” by all participants can be critically considered as a learning process during business development or research period. The research led to conclusions through questioning and sense-making through collaboration between team members and learning from the experiences of the company. This aligns with Reason (2001) who critically pointed out that participatory action research aims at “timely, voluntary, mutual, validity-testing, transformative action at all moments of living”.

With the understanding that personal, professional and political challenges (Chambers, 1983) will inevitably reflect in the participatory action research, the researcher, though able to involve direct decision making based on his position in the company, exercised extreme care to ensure the balance when blending subjective and objective perceptions relating to the topics being researched.

A major constraint in the execution of this study was that the information gathered through this action research had to be considered as highly sensitive. Special permission from top management has been obtained to allow exposure of certain information for the purpose of this thesis. Even though consent had been given, the author still needed to be careful to respect the confidentiality of information obtained from the company under study in particular the data collection is based on Board meeting minutes and Board meeting presentations.

The company under survey was a Hong Kong based construction company. The majority of the senior management were Mainland Chinese. Much of the information was recorded in Chinese and then translated for use in the thesis. There was also a problem of team member turnover as the duration of the study was over six years. Even though staff turnover is natural, the lack of long-term committed resources throughout the study, other than the author is considered a constraint to the research progress. Furthermore, the study was through live day-to-day personal and professional interaction. The repetitive nature of the surveys could therefore have led to familiarity, habitual unawareness and skewed interpretation. The time required to carry out the research was also a constraint because the company's overseas development process progressed in a continuous way. The researcher, co-researchers and other members of the development team were fully engaged in day-to-day practical development activities. Other than minutes of Board meetings, in-depth data collection, review, evaluation and findings had to be summarized after events, apart from the entry mode analysis where certain information was collected through the progress of the research.

4.2.2 The History & Organizational Structure of the Company

The study of the overseas construction business development examined the experience of a Hong Kong based construction contractor. The contractor was China State Construction International Holdings Ltd. ("CSCIH"). The name "China State" may easily being misunderstood to indicate that it is a Mainland Chinese construction company, it is appropriate to explain the organization and the history of China State in order to confirm that it is a Hong Kong based construction company.

The mother company of China State, China State Construction Engineering Corporation ("CSCEC") is a state-owned construction

company in Mainland China under the administration of the State-owned Assets Supervision & Administration Commission, Government of the People's Republic of China. CSCEC has operated actively in both domestic and overseas markets with construction and real estate business as its core business. CSCEC has become one of the largest construction enterprises in China as well as one of the largest Chinese international contractors. It has been listed as one of the world's top 225 international contractors by ENR since 1984. In the latest 8 years, CSCEC has retained its ranking in the top 22 as shown in Table 4.1 below. This means CSCEC has remained heavily involved in the international construction business.

Table 4.1 Ranking of CSCEC in the World Top 225 International Contractors

Year	2002	2003	2004	2005	2006	2007	2008	2009
Int'l Revenue In billion USD	1.09	1.48	1.95	2.12	2.08	2.96	3.24	3.52
Ranking	22	16	17	17	20	18	21	25

The global revenue, including domestic and international, of CSCEC remains in the top tier of world contractors. In Table 4.2 the ranking of CSCEC has become the 6th largest global contractor in the world. From Table 4.1 & 4.2, we can observe that in 2008 & 2009, the international revenue of CSCEC is about 12-15% of its total revenue. It should be noted that the subject year stated in Table 4.1 & 4.2 used the financial data of the previous year.

Table 4.2 Ranking of CSCEC in the World Top 225 Global Contractors

Year	2002	2003	2004	2005	2006	2007	2008	2009
Revenue In billion USD	5.81	6.4	8.11	10.27	12.52	16.15	21.52	27.66
Ranking	14	13	16	17	12	7	7	6

In 1979, CSCEC organized and set up a wholly owned subsidiary i.e. China Overseas Building Development Co., Ltd. ("COBDL") to engage in private construction works in Hong Kong. They undertook a private residential project in Hong Lok Yuen Phase 1.

In 1981, CSCEC set up a branch office in Hong Kong and was approved by the Hong Kong Government as an approved Group C (highest grade) overseas contractor to carry out construction works in Hong Kong for all five categories of public works including: building works, port works, roads & drainage works, site formation works and water works. In the 1980's, COBDL established China Overseas Building Construction Ltd. ("COBL"), China Overseas Foundation Engineering Ltd. ("COFE"), and China Overseas Civil Engineering Ltd. ("COCE") to execute private sector projects and also execute subcontract works for CSCEC.

In 1992, CSCEC decided to spin off its property development investment in Hong Kong. COBDL was renamed as China Overseas Land & Investment Ltd. ("COLI") and focused mainly in property development operations. COLI was listed on the Hong Kong Stock Exchange in August 1992. COBL, COFE & COCE were disintegrated from COBDL and become part of a new wholly-owned subsidiary of CSCEC i.e. China Overseas Holdings Ltd. ("COHL").

In the late 90's, China State Construction Engineering (Hong Kong) Ltd. ("CSCHK") was established. During 2001 to 2003, CSCEC transferred all its 5 Group C (highest grade) licenses, including (1) Water works, (2) site formation works, (3) port works, (4) building works, and (5) road and drainage works, with the Works Bureau and qualifications with Housing Authority to CSCHK because of the need to establish a separate and distinguished platform for developing the construction business in Hong Kong. The transfer of all licenses and qualifications was approved by the Works Bureau, Hong Kong Government and also the Housing Authority. All Hong Kong Government projects under the name of CSCEC with the exception of a few projects for certain institutional organizations were novated to CSCHK in Dec., 2001 and all Housing Authority projects under the name of CSCEC were novated to CSCHK in Oct., 2003.

In essence, CSCHK has been operating independently in Hong Kong since 2001. In 2005, CSCIH was interposed as the direct holding company of CSCHK. CSCIH was listed on the Hong Kong Stock Exchange in July 2005. Hence CSCHK is considered as a Hong Kong construction company that is listed and operating mainly in Hong Kong.

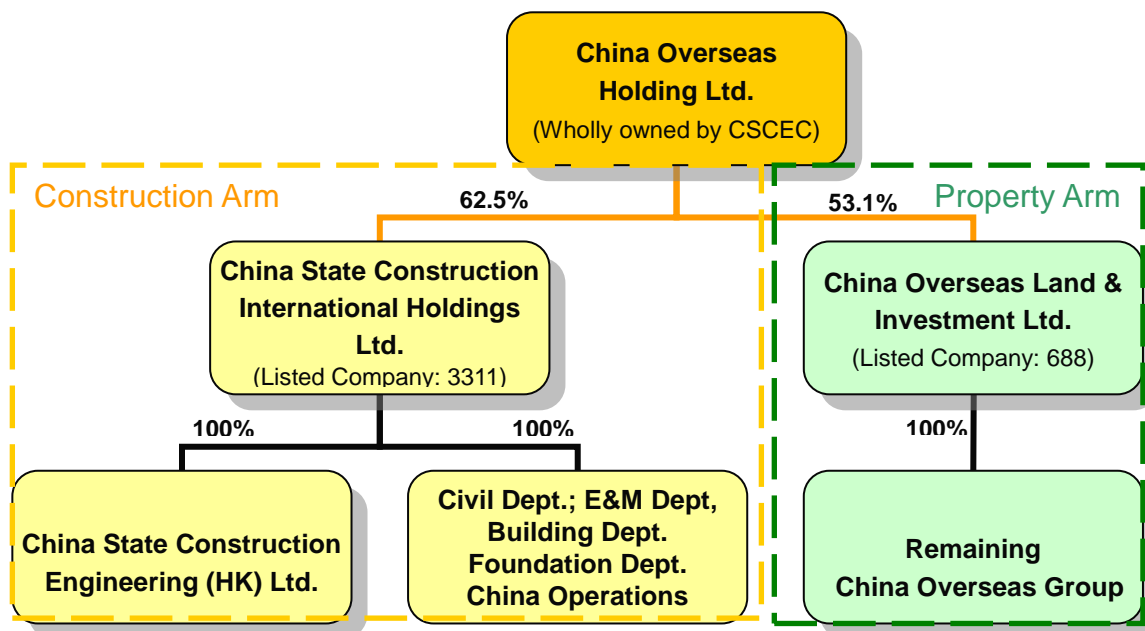
The performance of CSCIH in the past several years is detailed as per the following Table 4.3:-

	2005	2006	2007	2008	2009
Total Revenue in million USD	1,123	1,440	1,304	1,422	1,463
Total Revenue in million HKD	8,702	11,162	10,233	11,021	11,342
Net Profit	131	222	405	489	613
Net Asset	580	784	2,240	2,523	7,884
Cash on Hand	1,616	2,133	1,545	1,900	5,747

Source: China State Construction International Holdings Ltd. Annual Report 2008

The current organizational structure of the China Overseas Group is shown in Fig. 4.1. The licenses are under the name of CSCHK and the operations in India and UAE are all under CSCHK. Even though other cross regional business in Macau and China are under CSCIH, for the purpose of this thesis “China State” is considered as the company being studied including operations in Hong Kong, Macau, China, UAE and India. In the discussions below, the name China State is used throughout. This is adopted mainly because of easy reading and China State is the main operating company within the construction arm.

Fig. 4.1 - Organization Chart of China Overseas Group in 2009



China State plays an active role in the Hong Kong construction industry. It has undertaken over 1,000 projects in Hong Kong, China and Macau over the past 30 years, accumulating experience and multi-capabilities and competing with international contractors in Hong Kong, China and Macau. Among these three locations, the construction business is focused mainly in Hong Kong. Projects undertaken range from building works of public housing, private residential, office / commercial, industrial, Healthcare Buildings, educational and cultural facilities (including Disneyland Theme Park), hotels, public buildings (including Hong Kong International Airport Passenger Terminal Building); to civil engineering works of site formation, highways, bridges, reclamation and tunnel projects; as well as piling, mechanical and electrical engineering works. Based on its competitive core competence, China State is pro-actively expanding its construction business to overseas markets, and outstanding progress has already been achieved in UAE and India.

4.2.3 Cross-regional development in Macau & Mainland China

In the late 1990's, the company expanded its construction business to Macau and China through its contacts from Hong Kong. But this kind of business expansion was not well structured and was only executed when there was a need from acquainted client(s). When stepping into the new millennium, China State decided that development of cross-regional construction activities was a necessity. Hence they have strengthened construction development in Macau and China. In Macau, China State has taken over the control of China Construction Engineering (Macau) Co., Ltd. ("CCEM") from CSCEC. In China State has acquired a construction company from the mother company to execute construction projects in Mainland China. This type of cross-regional construction activities expansion is within the "Greater China Region".

In 2001, the China operation was awarded two major projects: one was the Guangzhou BaiYun International Airport construction management project; and the other was the Jabil Electronic Factory Phase 1 in Guangzhou. These two projects were either prime projects of national standard or major projects invested by foreign direct investment ("FDI"). Both contracts were completed successfully. However the China operation did not have a clear strategic direction. The China operation later turned to focus on local projects and compete with local contractors. Although the Mainland China construction division won a number of projects, the execution of these local projects proved to be problematic. The change in business strategy from a prime project focused to a local market focused made the China construction division appear to be unable to expand successfully in the Mainland China construction market. Only after 2006 did the Mainland Chinese construction division decide to focus mainly in FDI projects in the Mainland China construction market. In mid 2007, the division was awarded a large aluminum factory project with a total contract sum

exceeding 1 billion HKD; the project ran smoothly. In the 3rd quarter of 2007, the Mainland construction division merged into CSCHK.

The Macau operations have enjoyed the construction boom in Macau since 2003 mainly due to the opening of the market to more casino operators. CCEM has become one of the largest contractors in Macau and they have constructed several super contracts including the Macau Tourist Tower, Wynn Casino (Phase 1 – 3), City of Dreams and many other building projects in Macau. The success of the Macau operations is due to strategic decisions made in integrating the management and financial advantages of Hong Kong and Macau and utilizing their resources synergy which has enhanced the competitive edge of CCEM. The turnover of Macau was 1,214 million HKD in 2005, 1,537 million HKD in 2006, 1,586 million HKD in 2007 and 2,078 million HKD in 2008 (CSCIH, 2005, 2006, 2007 & 2008).

The operations in China and Macau are consolidated under China State's management and are considered as "off-shore" construction activities from its core activities in Hong Kong, albeit that these regions are considered as part of the "Greater China" concept, requiring 'management at distance'. The Company previously referred to this as "Cross-Regional Operations" to highlight the differences between management in Hong Kong and management at distance. Strictly speaking, such kinds of "Cross-Regional Operation" still involve a certain degree of cultural diversity as background education; training and development of these regions are different, even though all the people along the supply chain are still mainly Chinese. Hence the focus of management for these "Cross-Regional Operations" is in distance management. However, the management changes as distances increase (compare Guangdong at a limited distance of less than 200km with Beijing, thousands of kilometers away); and the difficulties in management increase tremendously. There were signs of long distance mis-

management observed in 2006; and hence, the strategic decision for Mainland China operations was restricted mainly to Guangdong province.

4.2.4 Pilot Exploration of Overseas Business Development in 2001- 2002

After the take-over of Macau operations and commencement of operations in Mainland China, the management of the Company had the intention of expanding their business overseas and assigned a business development manager to explore the feasibility of such expansion. Market research was carried out in Brunei, Indonesia, Malaysia, Singapore, Vietnam, Laos, Cambodia and India.

After general research and investigation, the company decided to focus only on Brunei, Vietnam and India. This was because studies showed that:-

- Indonesia has anti-Chinese activities which could cause security issues to the Chinese staff sent to those locations;
- Malaysia was well established and it was concluded that Malaysian Government over-spending in the past would slow down future development. Also, the fact that Malaysia construction activities were required to be headed up by local construction companies increased the difficulties in operating in Malaysia;
- Laos and Cambodia had several World Bank ("WB") or Asia Development Bank ("ADB") projects under review. However, safety was still a major concern, as investigations revealed that road projects in those countries still require the army to clear mines alongside the road construction.
- Singapore is well established but it is noted that it is quite difficult to enter into the Singapore construction market.

The Brunei construction market was small; but based on the wealth of Brunei and with known business associates there, the company considered that there might be a chance to win some projects there. India and Vietnam seemed to be the most promising construction markets. In 2001, WB & ADB investment in China started to decrease whilst increasing their investment in India and Vietnam. For example, National Highway Authority of India (“NHAI”) announced a “Golden Quadrilateral Highway Network” linking Delhi, Mumbai, Chennai and Kolkata with a total length of approximately 6,000 km of highway projects to be procured in 2001. The announced total investment in infrastructure development in India from 2001 to 2010 was estimated at about 11.8 billion USD. Similarly, the Vietnam infrastructure construction market also started up. Opportunities in Vietnam and India seemed to be a better choice for overseas expansion of the company.

Following approval by the Board, the company tendered for projects in Vietnam and India on a project-by-project basis. Tenders were submitted in 2002 but were not successful owing to limited resources available to allocate to the tender exercise together with the fact of lack of knowledge to those two markets, local alliances and supply chain. The determination of the management was also not strong in securing overseas projects as there were serious doubts as to whether the company was able to send staff to work in those countries, plus the fact that there was a lack of confidence in the successful operation of those projects.

The situation was compounded by the departure of the person in charge of this pilot overseas development trial; and the entire overseas construction development exercise experienced a 2 year suspension. Consequently, no overseas expansion activity took place until the end of 2004.

4.2.5 Decisions in Overseas Business Development in 2003

In the middle of 2003, the company management noted that the total Hong Kong construction market value continued shrinking as indicated in Fig. 1.1. Signs of market improvement did not call for optimism. A reduction in the number of forecast projects of the Hong Kong Government, the largest client in the construction market, was observed. A number of major projects including Shatin-Central Railway, Hong Kong island MTR lines, expressway connecting Northwest New Territories and Lantau Island, high speed rails etc. were not announced as anticipated. The company's management predicted that the Hong Kong total construction market value will be reduced even further.

It was clear to the management that Hong Kong construction market would become more competitive and hence, it would be more difficult to maintain the present turnover. The Macau gambling business appeared to be open to more operators and indicated a possible growth in construction activity. However, the management believed that the growth of Macau construction activities could only be considered as a medium term boom and should not be considered as a sustainable construction market. Furthermore, the Mainland Chinese Government was encouraging Chinese contractors to go overseas i.e. extend the Chinese construction activities beyond the Greater China (inclusive of Hong Kong, Macau and Mainland China). The top management believed that expanding business overseas was the only way forward.

In order to ensure sustainable growth of the company, the management had come to a unanimous decision to extend their construction activities overseas. It was also agreed by the members of the management that full support would be given to the overseas development group. By the middle of 2003, the Board formally agreed to the formation of Overseas Business Development De-

partment. The only outstanding issue was to recruit a suitable candidate to head the department as there was not a suitable candidate within the group who had extensive overseas working experience. Finally the management agreed to recruit from the marketplace a group leader who had extensive overseas working experience, leadership capability and good cultural understanding of a Chinese construction company. The person previously in charge of the pilot overseas business development in 2002 was persuaded to rejoin the company and he reported for duty in Dec., 2003. The person in-charge is the author. He is fully responsible for the overseas business development for the company and, for the research purpose of this thesis; he also acts as a participatory researcher. The overseas business development of the company started to take off. For easy reference, “the company” or “China State” will be the term used for the company being studied.

4.2.6 Choice of Target Market(s)

After the Overseas Business Development Department (“OBD”) was set up, certain guidelines were set up by the leader to direct overseas business development. Firstly, the overseas expansion should only focus in developing countries. This is because under-developed countries were not suitable for, and most probably not welcomed by, Hong Kong engineers as places to go and work. Also, developed countries were difficult to enter as the company was not yet ready to compete with the contractors in those countries. Secondly, the distance should not be too far away from Hong Kong and hence Africa, South America, North America, Europe and Australia were not considered appropriate locations at that time. Thirdly, the countries had to show interest in accepting the entry of Hong Kong construction contractor. Fourthly, the construction market of the targeted country had to have sustainable growth prospects and sufficient forecast volume of work for the company to develop.

After the guidelines were set, OBD set up an overseas business development group (“the Group”) including the researcher as the group leader together with several members, co-researchers. The Group carried out further investigation of the Philippines, Vietnam, Cambodia, Laos, Thailand, Malaysia, Singapore, Indonesia, Brunei, India, Qatar and the UAE. Extensive data collection, on-the-spot understanding of local culture, discussions with relevant parties inclusive of bankers, lawyers, accountants, government bodies, contractors, suppliers were carried out. Detailed analysis of the countries investigated was executed for the following:-

- political influence including political stability of the country, national relationship with China, openness of the government, protectionism, etc.;
- national policy including foreign exchange control, foreign investment control, immigration control, monetary policy, construction licensing control, land policy, investment policy, security, etc.;
- economic data including currency fluctuation, inflation rate, GDP growth, construction market volume, construction market growth, employment rate, etc.;
- geographic factors including international & domestic traveling convenience, logistic system, etc.;
- legal factors including law system, reputation in fairness of legal system, existence of arbitration regulations, etc.;
- taxation factors including complexity of taxation system, corporate tax level, personal income tax, VAT, import tax, other levies etc.;
- social factors including language barrier, cultural differences, religion impact, willingness of local construction industry to

accept foreign contractor entry, environmental, hygiene, safety etc.; and

- construction industry related factors including labour availability, local construction alliance possibility, subcontractor availability, material availability, equipment/plant availability, market competitiveness, internet/phone/fax connectivity, etc.

The analysis provided different perspectives for different countries. In order to ensure the selection of the entry mode, the Group with the consent of the management finalized its overseas expansion strategy:-

1. overseas business development should not affect the sustainable development of the Greater China region i.e. Hong Kong, Macau, and Mainland China;
2. the benefit to the company was always the priority and all necessary steps to be taken to avoid risks;
3. the company should seek for the earliest breakthrough to get the first contract;
4. profitability and effective management was of prime importance for overseas construction business development; and
5. the target was to ensure overseas business became one of the pillars of their business.

The Group also set-up several criteria to reduce the choices. The key elements used included easiness to enter, language, culture, legal system, accessibility, communication, transportation, security, market size and also market potential. There were other elements to be considered but the Group adopted the above mentioned elements as their preliminary and key selection criteria.

4.2.6.1 Ease of market entry

It was clear to the Group that the advanced western markets, including North America, European Community, Australia, Singapore, etc were not easy to enter based on the core competence of the company. These developed markets are said to be open but in fact the management skills inclusive of contractual, commercial, local specific requirements (e.g. union issues), administrative and technical capabilities required to enter such markets is high. From a different prospective to review the under-developed countries including Bangladesh, Columbia, Somalia, etc. might have a lot of opportunities, but the Hong Kong professionals will definitely not be interested to go to these locations. Hence, the point of entry is an important issue to the company. The possible choice was to consider the developing countries where the living environment should be more acceptable, security is better, the business environment is also attractive and the potential for sustainable development for the company is also in a better position.

4.2.6.2 Language

It is clear to the Group that language barriers might cause considerable problems to the future business development including, but not limited to the following, mis-translation, mis-interpretation and mis-communication. Hence the group decided that a commonly recognized language should be considered and based on the language best known and acquainted by the Hong Kong professionals, the best choice will be either Chinese or English. Other languages will require extensive translation and invite both legal and communication problems. As the Chinese language is not a commonly used language in the international business environment, the group eventually selected English-speaking countries as the priority for business development target nations.

4.2.6.3 Culture

Similarity in culture is also important: different culture may induce difficulties in collaboration as discussed in Section 2.4. It is well understood that cultural differences are unavoidable because there are cultural differences even between Hong Kong and China. Hence similarity of cultures is becoming an important consideration factor to the company's overseas business development.

4.2.6.4 Legal system

Unknown legal systems may be detrimental. For a Hong Kong based construction company, the better known legal system is the British system as they have been working in that system for more than 20 years. Both the contract conditions and the legal system must not deviate too far from their well-known British system, particular when considering that this is their first time working outside their home region i.e. Hong Kong.

4.2.6.5 Accessibility

The ease with which to enter the country including visa application and development accessibility is very important. It would be a waste of time to consider developments in remote locations where Hong Kong professionals are not willing to travel and it is difficult to get a visa.

4.2.6.6 IT & Communication Systems

In today's global business environment, communications through mobile phone, fax, telephone, web-site and IT system are becoming very important. Hence the availability of information technology and communication systems in the target location will be important as a prime element in selecting the

target market.

4.2.6.7 Transportation

The traveling distance must not be far. Furthermore, traveling to the location must not be overly difficult. Again, for first time overseas development of China State operations, traveling long distances and transiting several times is highly undesirable. Based on these criteria, Africa, North and South America are not the selections.

4.2.6.8 Security

Security has become a major concern, particularly after the 911 terrorism incident in USA. The company has placed the importance of security or safety for its employees working in its targeted countries as a top priority. Hong Kong Ming Pao published on 19th Nov., 2004 a map indicating the westerners' risk districts. In the map, risk rankings of the global countries are represented by lowest risk, low risk, medium risk, high risk and extremely high risk. The group considered that the target nations of the company must be low risk countries.

4.2.6.9 Market Size and Market Potential

The construction market volume must be high so that it will be a market easier for the company to enter. Further, high market potential means that the market will be highly likely to allow sustainable growth of the company in the medium to long term.

Based on the above mentioned criteria, the Group has eliminated many countries and districts easily, including North America, South America, Europe and Africa. The remaining countries are mainly in Asia. Even in Asia, countries fulfilling the above mentioned criteria are limited. In early 2004, the

Group selected both Dubai and India as their pilot target countries. Both of these regions have large construction market volume and their growth rates are high. A comparison in 2004 of the Dubai, India and Hong Kong construction market volumes is enclosed in Appendix A.

Obviously, preliminary studies and reviews of the local taxation systems, exchange risk, foreign control risks, social risk etc were also carried out by the Group. However, the Group has considered those risks could be studied in depth after the Board has reached its decision on target market(s).

The other prime consideration was to compare the selection criteria with the core competence of the company. The company's core competence represented how the company could adapt itself to the new market environment and whether it had the ability to handle and manage the uncertainties it would have to face when entering the new market. The core competence of the company included, but was not limited to, financial capacity, human resources availability, experience of international construction management, commercial handling ability and past cross-regional construction experience in the Greater China construction market. All of the above were represented by the extensive experience that the company has in building (residential, commercial, industrial, hospitality & etc) construction works, infrastructure (roads, bridges, drainages & etc.) construction works, reclamation works, water works, site formation works, and port works. This was particularly true in the experience of the company in Hong Kong when they had been competing and were continuing to compete openly with international contractors. It was the company's contention that they are ready for their overseas construction business 'adventure' as a result of experience gained in Hong Kong, Macau and even China.

Based on the Group's recommendation and understanding and analysis through their selected criteria and also their core competence, the company has chosen Dubai and India as their target market whereby Dubai will focus mainly on high-rise buildings and India will focus on infrastructure construction activities as shown in Table 4.4. Another major decision made is that the Dubai construction market would become the company's committed market owing to its ease of entry and simple taxation system. The India construction market would be approached on a project-by-project basis mainly as a result of the various unclear factors including taxation system, foreign exchange risks and legal system risks.

Table 4. 4 - Strategic Decision of China state for India and Dubai

	UAE	India
Set up	Local equity Co.	Project Office
Works Focus	High-rise Building	Infrastructure
Client Focus	Reputable Private Clients	WB, ADB & Reputable Clients
Construction	Self-perform major works	Work with local partners
Area Potential	High Growth with less risk	High Growth with high risk
Area Security	Low Risk	Low Risk

4.2.7 SWOT Analysis of the Company

The above consideration of entry was analyzed in conjunction with a SWOT analysis together with detailed target nations' investigations and analyses.

The conclusions from the review and analysis are listed below:-

4.2.7.1 India

When the Group reviewed the mode of entry to India in 2004,

they considered the SWOT analysis based on the following information available in 2004:-

- a. Political development in India was comparatively stable;
- b. The economic development of India was behind China whilst the economic growth rate is slightly lower than China;
- c. The Legal system was similar to the British system i.e. similar to Hong Kong with which the company is familiar;
- d. Private entrepreneurial development was much more advanced and healthier than in China;
- e. Infrastructure development in India was falling way behind but it is believed that India would devote a lot of resources to developing infrastructure as this will become the key success factor in the modernization of India;
- f. From 2000 onwards India had received for the largest amount of investment from World Bank and Asia Development Bank; and
- g. Standard & Poors had predicted that the Indian construction market would grow with a growth rate of 10% until 2012

SWOT analysis:-

- (i) **Strength of the company in India**
 - National Highway Authority of India (hereinafter termed as 'NHAI') required contractors to have (i) strong financial background and (ii) executed major projects in terms of contract amount and (iii) extensive infrastructure construction experience.

- The company's qualification was clearly able to comply with all of the above mentioned NHAI requirements. Local Indian contractors lined up to request the company to form joint venture with them to tender for the NHAI projects. The company enjoys the luxury of selecting good Indian partner(s). It was noticed by the Group that any contractor, particularly Mainland Chinese contractor, that enters and works in India solely by its own capacity has suffered major difficulties.
- Very few Chinese contractors had entered the Indian market as they are not familiar with the region and also worried about the relationships between China and India (The relationship between India and China had become very poor after the Indo-China war in 1962 owing to territory claim dispute).
- Indian contractors and NHAI welcomed the entry of Hong Kong contractors as they believed Hong Kong contractors had a better international construction experience and better knowledge of international commercial issues.
- The Group believed that the relationship network build-up in India may be easier as they had sourced a good Indian agent.

(ii) Weakness of the company in India

- The company was unfamiliar with the India construction market practices
- India had a massive low wage labour market and restricted the entry of Chinese labour force
- The company had yet to build up its supply chain in

India

- The company did not possess a project management team that had good international management experience.
- The company owned no equipment/plant in India

(iii) Opportunities for the company in India

- Net profit margins of Indian contractors were, in general, more than 3% (refer to Appendix B).
- The company, with its abilities in construction and project management was considered to be able to achieve (conservative consideration) a higher profit margin than Hong Kong.
- The company had the opportunity to become the first Chinese (Hong Kong) contractor to successfully enter the Indian construction market and bring along unlimited opportunities in the future

(iv) Threats to the company in India

- Lack of acquaintance with local practices including sophisticated taxation system, unclear government procedures, lack of local relationship etc.
- Keen competition from strong local contractors as well as international contractors
- Inadequate international management resources within the organization might become threat to the survival of the company.
- Inadequate support from HK head office services departments owing to psychological rejection to work in

India

- Mainland Chinese contractors working in India might compete with lower prices and threaten the survival of the company

4.2.7.2 Dubai

When the Group reviewed the mode of entry into Dubai in 2004, they considered the SWOT analysis based on the following information available in 2004:-

- a. Political development in Dubai was comparatively stable compared with Kuwait, Saudi Arabia, Qatar, etc.;
- b. The economic development of Dubai was the best and fastest in the Middle East. Dubai intended to become the business centre, logistic centre, tourist centre and financial centre of the Middle East and targeted Hong Kong as their bench mark.
- c. Commercial language used in Dubai was English and its legal system followed the British system i.e. similar to Hong Kong with which the company is familiar.
- d. The Government of Dubai was devoted and committed to the development of Dubai and hence placed considerable investment and promotion in Dubai's development.
- e. The entire Dubai city development was new and the intention was to develop the city on a large scale to ensure that Dubai becomes the "Middle East Hong Kong". Investors from other regions of the Middle East were entering Dubai with heavy investments.
- f. After the 911 disaster, Middle East investors are forced to seek new investment outlets other than USA and Europe and Dubai was their first choice.

- g. The Gulf Cooperation Council (GCC) and Muslim Funds further tied the Middle East investments in the region.
- h. Dubai had a simple tax system and also very low tax.

SWOT analysis:-

(i) **Strength of the company in Dubai**

- Dubai private clients required contractors to have (i) resources and (ii) good international construction experience and (iii) strong financial strength.
- The company obtained all the advantage of the above mentioned requirements of Dubai clients. In particular the company is able to mobilize Mainland Chinese labour force which is an obvious strength and advantage.
- Dubai had no restriction to import Chinese labourers.
- Very few Chinese contractors had entered Dubai market as several Chinese contractors had encountered serious contractual problems with Middle East clients and the results had stopped Chinese contractors entering the Dubai market.
- Dubai clients liked the entry of Hong Kong contractors as they believe Hong Kong contractors had better knowledge of international contractual and working requirements.
- The company believed that the network build-up in Dubai may be easier as Middle East people accept Hong Kong people.

(ii) **Weakness of the company in Dubai**

- The company was unfamiliar with the Dubai construction market practices
- Dubai used low cost Indian and Pakistan labourers where Chinese labourers are more costly.
- The company had yet to build up its supply chain in Dubai.
- The company did not possess a project management team that has good international management experience.
- The company owned no equipment/plant in Dubai.

(iii) Opportunities for the company in Dubai

- Profit margins of Dubai contractors were, as informed by local sources, high.
- The company with its ability in construction and project management should be able to achieve (conservative consideration) similar profit margins which are higher than in Hong Kong.
- The company could become the first Chinese (Hong Kong) contractor to successfully enter the Dubai construction market and expand into the surrounding Middle East construction markets.

(iv) Threats to the company in Dubai

- Lack of acquaintance with local practices including unclear government procedures, lack of local relationship and the extreme weather environment in Dubai.
- Competition from strong local contractors as well as

international contractors

- Inadequate international management resources within the organization might become a threat to the survival of the company
- Mainland Chinese labourers may not produce their back-home efficiency owing to the adverse climate situation
- Mainland Chinese contractors working in Dubai might compete with low prices and threaten the survival of the company.

Based on the above SWOT analysis, the Group was strongly convinced that its entry into the Dubai construction market would be beneficial and hence they considered Dubai as its long term committed market. Owing to the risks and uncertainties in India that can be foreseen, the entry into India has to be considered on a project-by-project basis.

4.2.8 Tendering Experience during overseas business development

The Group had developed a tender management procedure for its overseas construction development. The reason for the development of these procedures was that all tenders executed overseas are remote and it is difficult to ensure all risk/opportunity elements are considered. In addition, failure of any project would be detrimental to the development of the overseas construction business of the company. Hence the tender management procedure had become the critical factor to any tendering of overseas construction projects.

The tendering procedures were set up for all types of overseas construction projects. The prime preparation procedure was the

appointment of a Tender Manager reporting to the head of the management who would be responsible for the preparation, execution and management of the tender process until the award of the project.

The Tender Preparation Procedures reflected the distribution of works to be completed and the corresponding responsibilities. They also included Supporting Forms which were either optional or mandatory based on the requirements of the project.

The tender process had to be managed to achieve successful outcomes in terms of technical excellence, competitiveness and timely completion by combining the tasks of:

- Tender design (in case of a design & build tender);
- Construction methods and planning;
- Estimating;
- Contractual and financial review;
- Risk assessment;
- Tender submission document preparation; and
- Final Tender Review.

The objective in setting such a Tender Management Plan was to ensure:

- the highest quality tender produced within the tender period, and
- competitive, meets all Client's known and perceived requirements, and
- full coordination, cooperation and teamwork built up throughout the tender period, and

- a successful, profitable, and executable tender package within the acceptable risk profile.

The key was to organize the tender team with the leadership of the Tender Manager. The responsibilities of main stakeholders were clearly identified and the responsibility of the Tender Manager was listed as per the following:-

- Prepare Tender Approval Form and submit to management for approval as per the Procedure;
- Develop tender strategy;
- Negotiate with design consultants to ensure that the minimum design fee for optimum service is obtained;
- Manage tender process in accordance with the Procedure and ensure all required measures, agreements, actions and all other items that may be required for a complete and thorough tender preparation will be completed and followed-up all in a timely manner;
- Prepare tender budget for internal and external costs;
- Prepare, maintain and distribute the Tender Review Report;
- Arrange and chair the tender meetings;
- Arrange appropriate risk assessment workshops and ensure outcomes and actions are taken by the tender team through management of risk/opportunity, or allowances made in the estimate;
- Request, manage and review comments on the Contract documents by all respective parties;
- Prepare and maintain the tender preparation schedule;
- Ensure site visits are made, and a site visit report is prepared

and distributed to the tender team;

- Review and assess all major suppliers, subcontractors and consultant agreements;
- Develop, review and approve the IT concept with the IT Department;
- Ensure good communication is maintained within the tender team;
- Co-ordinate, attend and report to Management meetings;
- Meet regularly with team members and Management;
- Co-ordinate input from consultants, planners and estimators;
- Prepare the Final Tender Review Check List and manage all necessary actions;
- Approve cash-flow chart for the Final Meeting;
- Ensure the submission document is prepared according to the procedure described by the tender;
- Ensure timely preparation and lodgement of the tender submission;
- Prepare a tender analysis after the tender results are published;
- Ensure timely provision of design to the planners and estimators; and
- Prepare and hand over in case of contract award all relevant tender documents to the designated Project Manager for contract execution including tender documents, offer to client, contract documents, correspondence tender phase, tender estimate, construction schedule, site organization chart, own works / subcontract schedule, any valid agreements (pre-bid

agreement or JV agreement), contract estimate (if available), and soft copy of all of the above items

The responsibilities of other the stakeholders of the tender management team are defined and enclosed in Appendix C.

Besides the selection of overseas market and the entry strategy, tender management is a very important tool for overseas business development as it is the last step to mark the forecast result of overseas expansion. It is the verification step to all previous investigations, forecast, assumptions and associated decision makings. It lays the groundwork for future execution.

4.2.9 Discussion of specific problems encountered

A typical example of tendering process for an overseas construction project of the company is the design & construction of the new Hyderabad international airport passenger terminal building in India. A paper jointly written by Cheong & Baldwin (2006) demonstrated the application of tender stage ITC for design and construction projects in India. A further detailed study was conducted by the writer in his guided study paper for Hong Kong Polytechnic University in Nov., 2006 with a title: "Implementation of ITC based Management Systems in Large Overseas Construction Projects: A case study of a Hong Kong based international contractor" (Cheong, 2006).

The paper basically reported the typical technical and resource issues. But it did not reflect one of two very important issues: the alternative design; and the contractual issues.

Alternative Design ~ The tender was issued based on a Client's preliminary design. The tender team engaged a Hong Kong architect who is specialized in airport design. Through close liaison and discussion on constructability and engineering feasibility

among the tender team, (which comprised the contractor, architect, engineer, MEP subcontractors and related subcontractors,) the architect came up with an excellent alternative design. The alternative provided an airport with the original conceptually designed roof height but all the levels were redesigned and re-engineered to provide a saving in usable area (refer to Fig. 4.2) as well as a substantial saving in excavation (Refer to Fig. 4.3). The airport passenger terminal building was originally designed to cater for 7 million passengers per annum.

The other major alternate improvement proposed by the China State was that the usable area is much more efficient than the Client's original conceptual design. The comparison of the usable area is shown in Table 4.5.

<i>in sq. m</i>	Conceptual Design	Alternative Design	Differences
General Area	38,819	41,071	+2,252
Shops, Beverage	11,714	13,092	+1,378
Lounges	1,854	3,032	+1,178
Offices	7,018	9,272	+2,254
Stores	3,257	3,654	+397
Apron Services	4,450	4,957	+507
Technical Areas	34,316	21,234	-13,082
Personnel	2,920	3,148	+228
Total	109,833	104,592	-5,241

The alternative design made the Hyderabad International Airport Passenger Terminal more efficient. The client had more commercial usable areas and was able to reduce technical areas. This increased the potential income of the client during his operation period and also made the alternative more attractive to the client from a commercial aspect.

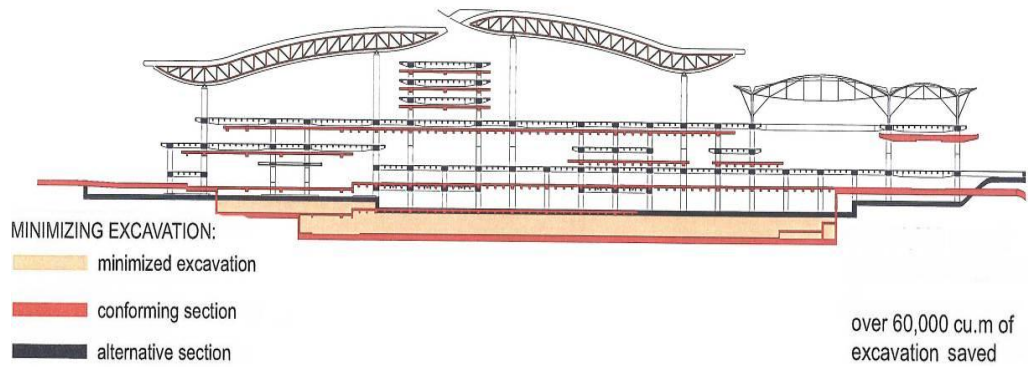


Fig. 4.2 HIA redesign and arrangement of usable area

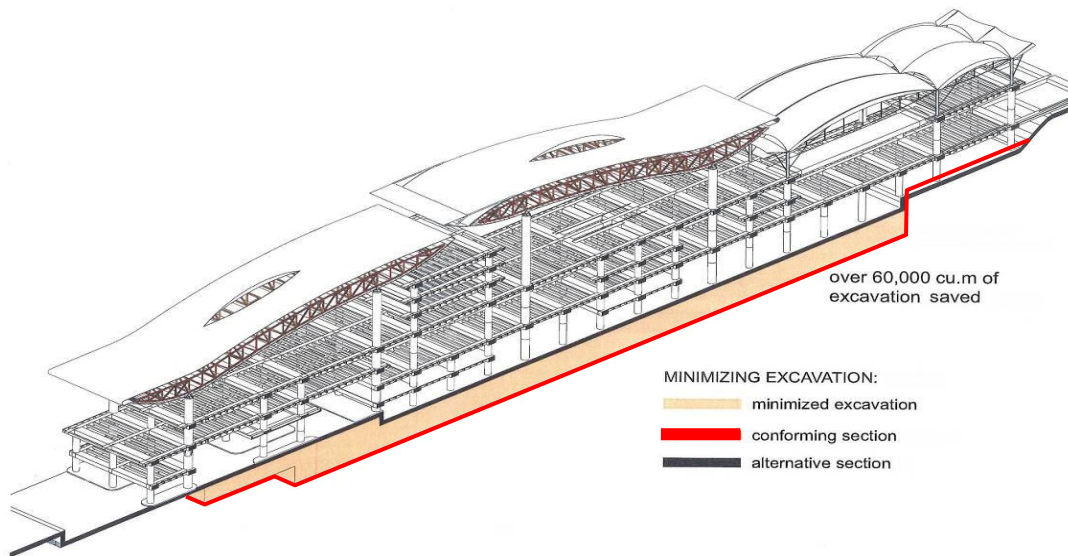


Fig 4.3 HIA redesign for saving of excavation

Owing to the alternative design and also the tender price negotiation, there were a certain numbers of systems required to be adjusted including electrical & mechanical system, air-bridge system, security screening system, baggage handling system, elevators & escalators, IT system, security system, building services system, surrounding earth retaining structure and sewage/drainage system. All the adjustments involved complicated specification negotiation, re-alignment of the systems, integration considerations and associated changes in structural layout. This again has affected the scheduling consideration, formwork system and subsequently cost implication.

Contractual Issues ~ The prequalification was called by the Client

in June 2005. After China State had been short listed as one of the bidders in September, 2005, the tender process commenced immediately. The closing date was end of 2005. As the Client was the BOT contractor as well as a private sector client, the technical and commercial assessment of the bids were open together. All the bidders were informed that contractual qualifications of all the bidders would only be considered and discussed after the “preferred bidder” was selected. The technical and commercial assessment went on for nearly six months and eventually China State was selected as the “preferred bidder”. Then the Client demanded to participate in the final negotiation of the terms and conditions of all the selected suppliers and subcontractors. The process extended for another 2 months. Simultaneously the contract terms and conditions discussions commenced. It was noted right from the beginning that the contract terms and conditions were onerous and hence China State had heavily qualified its bid. The contract was not adopting the FIDIC, ICE, NEC or any other international adopted contract but had been drafted and prepared by the Client together with a law firm. Hence the contract terms and conditions were perceived to be totally favourable to the Client. The negotiation went on for two and a half months without any progress. Eventually China State had to report to the Client that they intended to withdraw from the tender owing to such biased terms and conditions. The Client eventually agreed to negotiate on the contract terms and conditions, which took another half a month. The contract terms and conditions were rewritten in a more fair and reasonable way even though they were still onerous to the contractor. The contract negotiation was eventually completed at the end of August, 2006 and the contract signed in Sept., 2006. The whole tender process lasted for a full twelve months period. Yet the protracted negotiations proved to be well worthwhile. The contract terms and conditions were so stringent that they also imposed on the Client several internal constraints during contract execution. A number of changes did help China

State in their claims and negotiations with the Client in the contract execution stage. China State eventually achieved good results for this project and one of the prime contributing factors to the success was good tender management including the in-depth contract negotiation. This process could also be considered as a serious test to the risk management of the company.

Leadership and Team Work ~ The tender team was led by a strong tender manager. It is well known that the environment of India is completely different to Hong Kong. The tender team had to stay in India for the entire tender period which was originally envisaged to be 4 months but eventually extended to some 12 months. The tender team had to work with local members from alliances where cultural conflicts could easily be observed from time to time. On the resources level, the tender works involved local / international suppliers / subcontractors. The tender technical issues involved design, structural, architectural, MEP, security, building services, baggage handling, air-bridges, elevators, escalators and IT systems. The integration of architectural, engineering, commercial, and contractual issues increased the difficulties of the tender preparation in both breadth and depth. Affected by such intensity of workload, a number of tender team members showed dissatisfaction and complaints blended with homesick and emotional problems. The team leader together with a few key members managed to tie the group together and eventually completed the 12 months long tender process in India. For such a long bidding process and also a project-based tender, the personal care and management that tie the team together for such a long time was a difficult task. The general comment from the tender team was that the leadership was good and well organized.

4.2.10 Conclusion

It is obvious that pre-contract business development processes including entry selection, entry strategy and tender management are

very important procedures and controlling tools of overseas business expansion. They lay down all the groundwork necessary for future execution. They also verify much of the investigations during the period in tax, law, material supply, resources supply and local works customs, together with all associated forecasts, assumptions and associated decision making. Usually, any investigation at the entry stage is not considered to be thorough and needs further clarification. A case in point is taxation requirements: the understanding, interpretation, implementation and execution of tax related issues can only be better understood and budgeted for at tender stage owing to better and in-depth understanding of the practical situation. In the case of a situation where an understanding of the issue seriously deviates from the preliminary investigation, assumption, forecast and associated decision making, it would not be too late to review the entry strategy and revised decisions can be taken to accommodate the newly noted environment. The strategy for overseas business development was different for India and Dubai. The Indian operations were based on project-based development until the time that the uncertain factors could be reduced. The Dubai operations were clearer as the taxation and legal issues were less complicated and hence the Dubai operations are developed on a long term basis. Owing to such differences in strategic arrangements, Dubai operations were substantially larger than the project-based operations in India. From 2004 to 2007, overseas business development of China State went well and their human resources allocation to India and Dubai can be observed from the following Table 4.6.

	India		Dubai	
	HK/PRC	Local	HK/PRC	Local
Dec-04			10	5
Jun-05	11	0	23	15
Dec-05	28	0	47	36
Jun-06	35	121	102	124
Dec-06	38	118	130	176
Jun-07	4	3	189	212

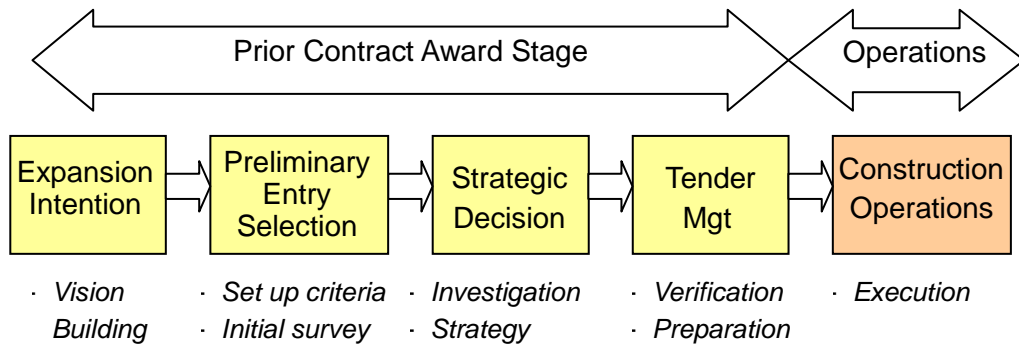
Up to Sept. 2007, the Dubai subsidiary has won a total of 6 projects and India has won 2 project-based projects. The commitment and size of operation can be observed through the turnover of Dubai and India between 2004 and 2007 as shown in Table 4.7. It should be noted that the Dubai operation includes its office set-up costs in the earlier years.

In Million HKD	Dubai	India
Turnover	2,332	826
Profit after tax	17.7	20.3
Profit Rate	0.8%	2.5%

The successful business development of China State owed a lot to its detailed investigation as well as entry mode strategic decision making in the earlier stage. It was blended with the successful tender management that verified all the forecasts, assumptions, and associated decision making of the earlier stage. The overseas business development model of China State can be built up as shown in Fig. 4.4. For the purpose of this paper, the Prior Contract Award Stage development process is the main focus of re-

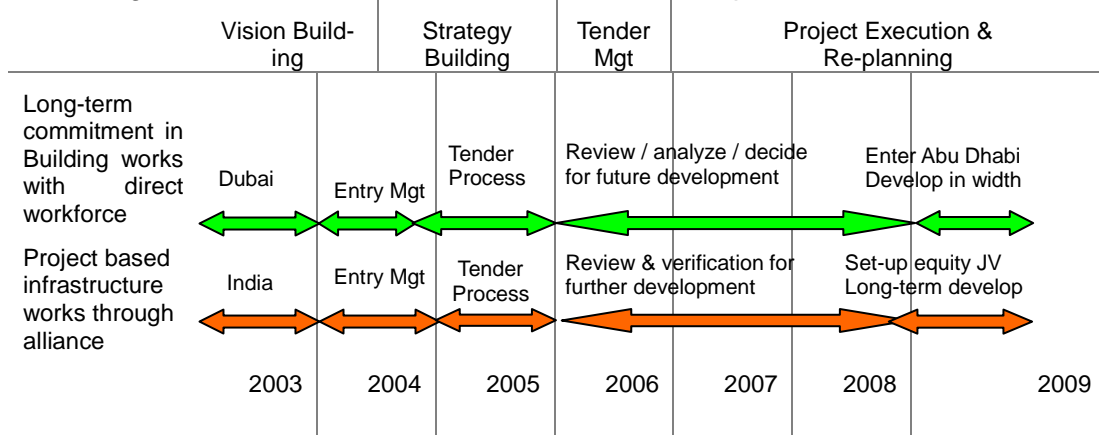
search.

Fig. 4.4 – China State Overseas Business Development



In light of the overseas business development model mentioned above, China State overseas business development can be summarized into two major categories including long-term committed equity build-up characterized by direct labour execution of works in Dubai and also project-based infrastructure works execution characterized by working with alliance in India. The characteristics of China State overseas construction business development model can be expressed in Fig. 4.5.

Fig. 4.5 – China State overseas business development characteristics



4.3 Pilot Survey in 2004 - A Study of Hong Kong based Contractors in their Business Development Strategy

4.3.1 Introduction

The total volume of Hong Kong construction market has continued to slump since 1998 (see Fig. 4.6). But in

spite of being listed as the 15th largest construction market in the world in 2003 (see Fig. 4.7), the latest indication of Hong Kong Government in 2004 was that public spending in construction would become even less.

Competition and the survival of Hong Kong based construction companies, including local established companies and Hong Kong based international contractors, and had become more difficult. Furthermore, public sector projects were becoming bigger and bigger and the number of contractors winning projects was becoming less. On top of these problems, larger projects usually demanded higher technical capability and local contractors were yet to prove themselves able to compete with international contractors.

For international contractors, working on a global basis, their decision to remain in Hong Kong construction was that its Hong Kong

Fig. 4.6 Hong Kong Construction Volume 1993-2003

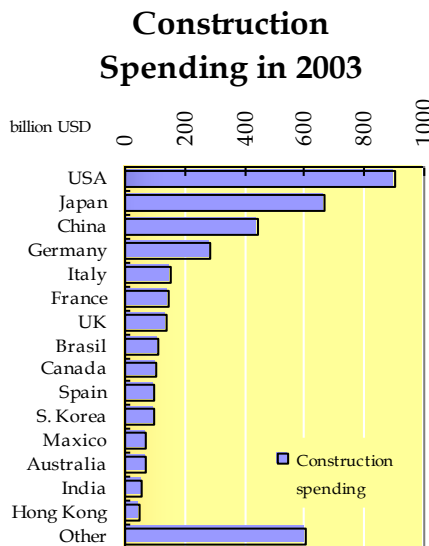
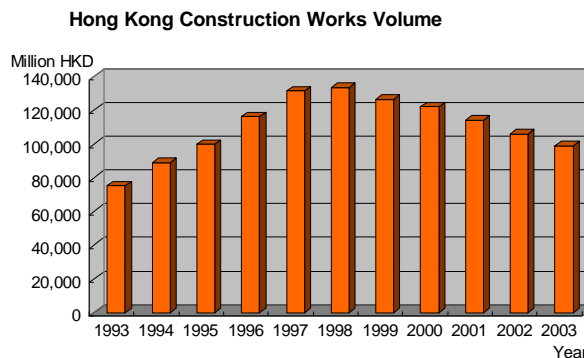


Fig. 4.7 Top 15 Nations Construction Spending in 2003

operations could be self-sustaining for survival. Expansion in the Hong Kong shrinking market seemed impossible. However, for Hong Kong local contractors, survival means a combination of maintaining the same management team, resources, turnover and profit. The lower the turnover, the higher will be the overhead; and competition will become more difficult. Therefore, survival could be achieved by either cutting costs or finding new sources of revenue. Cutting costs implies the reduction of company scale and subsequently reduction in capacity and/or ability of the company to perform. Finding new sources of revenue could be achieved through diversification in different sectors of works or expanding the construction business outside Hong Kong.

In the 1990's Hong Kong contractors had so much work that did not really considering expanding their business outside Hong Kong. For those that were, consideration was only given to nearby regions with which they were acquainted or had some relationship. Expanding outside Hong Kong was never a serious issue.

Stepping into the new century, the need of local contractors to consider expanding their business outside Hong Kong became more apparent. Companies were looking seriously about how and what they could do to bring about such expansion. Each of these companies came across different problems: difficulties in locating the right markets; penetration into those markets, getting people to work overseas; gaining initial knowledge and information; zero government support; risks and other miscellaneous difficulties. They realized that all these difficulties were not simply technical or contractual difficulties but highlighted political, social, economical and human perception risks. It is an interesting point to consider whether Hong Kong based contractors wanted to expand business outside Hong Kong and also to enquire as to how the companies were addressing and overcoming those difficulties. Based on these questions, a survey was conducted in 2004 to consider these issues. This also served as the initial survey for this thesis.

4.3.2 Survey Considerations

For the survey of Hong Kong contractors, it was decided to adopt the qualitative methodology on practical grounds, based on a descriptive research approach (Healey, 1999 and Harris, 1998). The setting of the questionnaire and constraints of the initial survey have been discussed in Chapter 3. Pre-arranged face-to-face interviews were conducted in a convenient place agreeable to both interviewee and interviewer. Based on the assumption that few contractors were working overseas (outside Greater China including Hong Kong, Macau, Taiwan and Mainland China) in 2004, the term "overseas" in the initial survey includes Greater China and countries outside Great China.

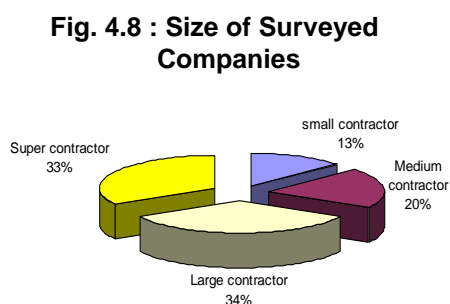
4.3.3 Survey by means of Interviewing Hong Kong based Contractors

A survey of 15 contractors working in Hong Kong was conducted between Sept. 2004 and Nov. 2004. The questionnaire is enclosed in Appendix F; and the records of the survey are enclosed in Appendix G.

4.3.4 General surveyed companies' information

Sizes of the surveyed Companies are shown in Fig. 4.8. Definition of sizes is defined by turnover per annum where:-

- small contractor ~ turnover < 10 million USD/annum
- medium contractor ~ 10 million USD < Turnover < 100 million USD
- large contractor ~ 100 million USD < Turnover < 1 billion USD
- super contractor ~ turnover > 1 billion USD



The contractors surveyed include 5 international contractors (33%) and 10 local contractors (67%) (See Fig. 4.9). The international contractors include German, Japanese, Spanish and Chinese contractors. 12 out of the 15 surveyed contractors are 95%+ construction based. The remaining 3 have construction activities accounting for 60% ~ 90% of their turnover.

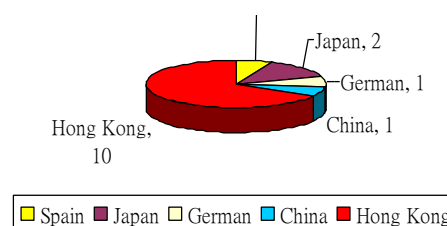
An interesting fact was that all the international contractors were developing their construction business worldwide. For the Hong Kong local contractors, 50%

of them were expanding their business outside Hong Kong but within the "greater China" region. Another 20% were remaining within the South East Asia region; and only 30% were willing to develop their overseas business geographically to Middle East, which is still basically within Asia.

Both small HK contractors had more overseas construction business than local construction business (50% and 80% respectively). For the 3 medium HK contractors, then business of one was 100% local. For the other, business was 80% local. The remaining company's business was split 50-50. For the 4 large HK contractors, all of them had over 90% of their business dependant on local construction activities.

All the contractors were profit orientated. Four companies mentioned that profit and turnover were equally important. 40% of the companies surveyed claimed that their Board was the ultimate decision maker for the company to launch business in overseas markets.

Fig. 4.9 : Contractors Origin



4.3.5 Overseas Business Development

In considering the important factors in expanding business overseas, all the contractors were considering overseas business in a very sensible way. Their prime focus was mainly on political stability, size of market, potential of the market, and knowing the market. A secondary focus was on margin, attractive policy and relationships. Their least concern was “excess resources within the organization”. This indicates that the contractors were not likely to expand into overseas market simply because the local market was slumping. Most of them had a clear consideration in their minds regarding the target market. Without satisfying their considerations, it seems that the local contractors do not intend to expand their business overseas (see Table 4.8).

Table 4.8 Market Considerations

Importance of Consideration	Very Important	Important	Combined
political stability	60%	20%	80%
size of the market	47%	47%	94%
potential of the market	54%	40%	94%
Easy entry due to existing “guanxi”	20%	60%	80%
Excessive resources within organization	7%	27%	34%
Market known to have good margin	13%	60%	73%
Visited and knew the market	53%	33%	86%
Attractive policy of the area	33%	47%	80%

The other considerations of the Contractors in expanding their business outside Hong Kong, (which are usually very important), were quite diversified, including security, good national relationship, construction ‘rules of the game’, following in mother company’s footsteps, client availability, home country support, currency stability, government aid scheme, mature market, payment security, etc. In general, political security was the most important consideration for most of the companies.

Another interesting result of the survey is that 8 out of the 15 (53%) surveyed companies mentioned their Chairman or Managing Director as the decision maker for overseas business development. This shows the local construction companies were strongly following the strategy set up by the company leader. Further, 9 out of 15 (60%) of the contractors had formal and systematic reporting systems for the company to make the decision to expand business overseas. This indicated that Hong Kong contractors have very strict and straight internal management systems in control of their operations.

8 out of 15 (53%) contractors' organizations employed external consultants, to advise them in expanding their overseas business. This indicated that most of the contractors do not undertake their own research or analysis when considering expanding business to overseas market. This is also probably the reason the Hong Kong contractors do not have a clear idea on how to execute overseas business expansion. Hence their considerations were diverse as shown above.

4.3.6 Risk Management Survey

The question "Does your organization consider opportunity more important than risk?" stimulated some reaction. Only 1 company answered in affirmative, with 8 out of 15 reckoning that risk is more important; and the remaining 6 recommending that risk and opportunity should be considered in balance. The one company claiming that opportunity was more important than risk was, one of the smaller contractors.

Only 3 companies admitted to not having a risk management strategy on expanding overseas business. The number reduced to 2 when they were considering launching business in a certain country or district. For the tendering stage and execution stage of projects, all contractors exercised risk management.

The approach for risk management by all contractors (100%) was based on systematic detailed analysis. Only 2 major international contractors used the Monte Carlo Risk Analysis Tool in risk management and such tools were only used for specific identified projects. Another major international contractor used risk modeling analysis but this was also only used for specific identified projects.

4.3.7 Tender management

14 out of the 15 contractors had fixed tender management procedures. In fact, just more than half of the contractors placed their prime emphasis on profit. The remaining placed their emphasis on risk, technical risk, client reliability, resources and escalation.

All the contractors' organizations had similar criteria for consideration of tender management. Even though the terminology might have been different, the critical considerations were similar. These included cost, schedule, technical solutions, risk, relationship and other commercial issues.

73% of the contractors interviewed monitored their tender expenses. However, the way they assessed the effectiveness of the tender management was quite diversified. Only 33% used their tender award success rate as their monitoring means. The others measured effectiveness by means of analytical assessment, they reviewed by how much they deviated from the market price or how close they were to the awarded price.

4.3.8 Government Aid to Construction Operations outside Hong Kong

An interesting question brought out during the interviews was that local contractors were seeking assistance from the Hong Kong Government. Most of them recognized that monetary assistance

from the government was not a viable option. However, the general opinion appeared to be that Hong Kong Government should do something to assist Hong Kong contractors to expand their business overseas including business in Mainland China and Macau.

Throughout the survey, it was interesting to note that reference was made to how other Governments provided aid to their own contractors to expand business overseas. In considering the Hong Kong Government which had done nothing to assist its contractors, it is worthwhile to take a closer look into the situation and see how the Hong Kong Government could and should be encouraged to provide assistance to its contractors.

4.3.9 Discussions

From a historic viewpoint, the Hong Kong construction market reached its peak in the 90's. In fact, in 1997 and 1998, the market volume boomed to historic heights. Following the Asian economic crisis, the Hong Kong economy began to fall into a depression cycle. The Hong Kong construction market, affected by the market economy and worsened by the local construction scandals, slumped to an alarmingly low level of activity. Extra demand for infrastructure and property development became less and less. The survey indicated that Hong Kong contractors are only willing to expand overseas if they can find suitable markets, and only if those markets were well known to them. At that time Hong Kong was still listed as the 15th largest construction market in the world. Hong Kong contractors were having a difficult time securing work but the perception was that the market was still large enough to sustain the local contractors but that some of the international contractors may be squeezed out of the market.

Another consideration was that the projects in the Hong Kong construction market were becoming bigger and technically more demanding; and the projects were mostly taken by international

contractors. It was likely that local contractors would be short of work in a short period of time. Further, most local contractors did not have sufficient technical ability or financial capacity to undertake such larger, more demanding projects.

There was a strong sign that Hong Kong contractors preferred to concentrate their activities within their original colonial home. This is probably a result of the “home orientated” feeling of the contractors. (In fact, this is also true for Hong Kong construction related professionals.) Construction engineers are used to working in the territory of Hong Kong. Even going to work in Macau or China can be a demanding change for them. However, owing to the slump in the industry, more people were willing go outside Hong Kong in 2004. However for the mature experienced construction professional, it was still difficult to interest them in working outside Hong Kong.

The survey and related industry data showed that unemployment of the construction population in Hong Kong was becoming worse. Total unemployed persons in HKG in 2003 was 277,600 i.e. 7.9% of the total labour force. In comparison with other major economies in the table (Hong Kong Government 2003), Hong Kong had a high unemployment rate (See Table 4.9).

Table 4.9: Unemployment Rate of Hong Kong and other major economies

Economies	HKG	China	Taiwan	Singapore	South Korea	Japan	UK	USA
Unemployment rate	7.9%	4.3%	5.0%	4.6%	3.4%	5.3%	5.0%	6.0%

Owing to this high unemployment rate, it was expected that the Hong Kong engineers working in a sharply shrinking market would have a higher tendency to work overseas as there may not be sufficient job opportunities for everyone plus the fact that new graduates from Hong Kong and overseas would further penetrate the saturated Hong Kong market.

4.3.10 Hong Kong Engineers Working Overseas

The reason that contractors and engineers are reluctant to work outside Hong Kong is one of the factors that discourages Hong Kong contractors from expanding their business overseas. A lack of reliable and loyal personnel to work overseas is a major disincentive for many Hong Kong contractors. During several interviews with various contractors, this specific topic has been widely discussed in depth. The general perception of local contractors is that local engineers have strong family feelings and are hence reluctant to leave their families to work overseas. They believe that local engineers have good prospects in the Hong Kong market and there is no need to consider working overseas. Some of them indicated their belief that local engineers are more willing to work within the greater China region, including Mainland China, Taiwan and Macau where they have a culture and language familiarity. They are not exposed to so much of a culture shock. Local contractors agreed that Hong Kong people, in general, have a lack of career vision in this respect.

It was interesting to observe the comments of one Mainland Chinese contractor who reckoned that Hong Kong engineers are reluctant to work overseas because of their education and cultural background. Their comments are that Hong Kong people exhibit a lack of 'spirit of adventure' and are used to being obedient. They are conservative and satisfied with the local employment situation, having strong family perceptions. They usually don't have open and long term vision. They prefer to await opportunity coming from the local market and don't want to explore opportunities overseas. Even though the market conditions are tightening up and there are more young engineers accepting the fact that they have to go and work outside Hong Kong, the majority of them are still confined in their vision to remain in the Hong Kong market. The conclusion that this company came to was that Hong Kong people do not have an innovative or creative mindset. The Main-

land Chinese believe that “mindset determines a person’s activity and the activity determined the success of the person”.

Another interesting view is from a small contractor. His comment is why should a company engage Hong Kong engineers to work overseas and not localize the operations in the designated overseas market? He also reckoned that people in Hong Kong usually over-estimate their ability. In fact, he strongly believed that local engineers in those designated markets are equally capable provided that they are adequately trained.

4.3.11 Conclusion

The survey was carried out to gain an understanding of Hong Kong based contractors tendency to work overseas. At the time of the survey, the Macau market had not yet started to boom. From the results of the survey, it was obvious that the larger Hong Kong contractors had little intention to expand overseas. But the smaller & medium sized contractors had clearer intentions to work overseas. The researcher sensed that the construction market environment in Hong Kong was quite unfavourable for small & medium sized contractors. The only Hong Kong contractor with a strong intention to expand overseas was China State Construction. China State Construction has sensed that the Hong Kong construction market is not able to provide sustainable growth in the near future; and overseas expansion was their only way out to ensure the growth of the Company.

The search for Government assistance is an interesting topic and it is not easy to find any substantial data for such assistance. Consideration to the policies of governments indicated that only the Spanish contractors had encouragement and assistance from the Spanish government to expand their operations overseas, albeit on a small scale. Through discussions in the interview with other international contractors, Japanese contractors have been denied

any aid from the Japanese government. The market rumors that Japanese contractors always secure government assistance appear to be untrue. However, assistance of governments to their respective construction companies in expanding to overseas markets could become another research topic. For the purpose of this thesis, the main conclusion to be drawn in this 2004 survey was that the Hong Kong government provides no assistance at all to any contractors wishing to expand overseas. Such government assistance might include promotion of the concept of working overseas to the industry or to provide certain aid and advice to Hong Kong companies considering this. If government assistance or promotion had been available in the past, the willingness or intention of Hong Kong contractors to expand overseas could and probably would have been far more evident.

4.4 A Follow-up Study of Hong Kong Contractors Expanding to Overseas Construction Markets – 2008

4.4.1 Introduction

The Hong Kong government published figures for the Construction Market Volume (nominal terms), (see Figure 1.1) shows that the construction market volume had risen to a maximum in 1998 and then continuously fallen to 2006. The rate of shrinkage of the Hong Kong construction market volume seems to have slowed down in 2005 and 2006. In 2007 and 2008 the market showed signs of improvement. However, the Hong Kong construction industry envisaged that the market conditions would remain pessimistic unless the Government, the largest employer in the construction industry, increased and implemented the volume of its projects. At the beginning of 2008, the industry still awaited the promised launching of 250 billion HKD of 10 mega projects as announced by the Chief Executive in the end of 2007.

Following the initial survey undertaken in 2004, (see Section 4.3), a

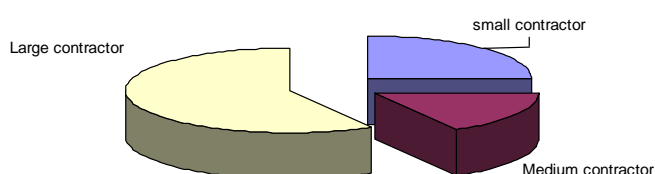
follow-up survey to HK contractors was carried out in the first quarter of 2008 to ascertain changes in the market perspective of the contractors' organizations and highlight identify the experience they had gained from their overseas expansion activities which includes Greater China inclusive of China, Macau & Taiwan together with overseas activities. The survey targeted the same companies surveyed in 2004 so that trends could be established. However, only 6 HK contractors surveyed in 2004 were available or willing to be interviewed in the follow-up survey; and hence, the remaining three were not included. The survey also attempted to cover the views of the HK contractors on the Government's involvement in promoting overseas expansion.

4.4.2 Survey of Hong Kong based Construction Contractors in 2008

The survey was carried out of 12 HK contractors by means of interview with their Executive Director, Managing Director, CEO or Chairman. Invitations for interview were sent to 16 HK contractors requesting a one hour interview. Three of them declined to participate, citing tight time schedules rendering them unable to afford spending the time required for the interview; and the other one was a subsidiary of an international company i.e. not relevant to this survey. The interviews with the 12 HK contractors were conducted in February 2008. The minimum time spent was 45 min. (2 instances) and the maximum time spent was 2 hours (2 instances). On average, the time spent was about 75 minutes. The interview record is shown in Appendix I.

The size of the surveyed construction organisations is shown in Fig. 4.10.

Fig. 4.10: Size of Surveyed Hong Kong Contractors



The definition of the size of HK contractors used was similar criteria

to that in the initial survey conducted in 2004:-

- small contractor ~ turnover < 10 million USD/annum
- medium contractor ~ 10 million USD < Turnover < 100 million USD
- large contractor ~ Turnover > 100 million USD

The surveyed HK contractors are more inclined to be Group C listed contractors in the approved contractors list of Hong Kong Government. There are a total of 105 numbers of Group C companies in Hong Kong (Group C list of approved contractors for Public Works by Works Branch, Development Bureau, Government of Hong Kong SAR). Deducting the affiliated companies of the contractors surveyed (5 nos) and also deducting the international contractors (approximately 30 nos), shows the surveyed Group C contractors (total 10 companies) represent 14% of the Hong Kong Listed Group C contractors. But for the smaller and medium enterprises, the representing percentage is obviously much smaller.

The works categories of the companies surveyed covered all main construction works including, piling works, mechanical & electrical works, building works, port works, road & drainage works, site formation works, water works and site investigation works.

Ten out of the 12 HK contractors had 80%+ of their turnover concentrated in their core construction business. Two of the companies had 50% of their turnover in construction business. Therefore, it is considered that the surveyed HK contractors are all construction orientated companies.

All the surveyed companies had expanded their construction activities outside Hong Kong, whilst one company had associates within their Group working in Australia and China. All 11 HK contractors were actively participating in construction activities in China and Macau. Seven out of the 11 HK contractors (64%) were working

overseas; and 2 were just starting their construction overseas activities. One company intended to close down their overseas business in 2008.

The cross regional markets undertaken by the contractors included Hong Kong, China, Macau and Taiwan (hereafter termed as 'Greater China') together with nations outside Greater China including UAE, Philippines, Australia, Qatar, Vietnam, India, Thailand, Malaysia, Cambodia etc. This implies that the overseas activities of the contractors were still focused on the Asian construction market. It is noted that the Chinese, Taiwan and Singaporean contractors were expanding already beyond Asia and extending to Europe, North & South America and Africa. Table 4.10 shows the changes of the overseas activities between 2004 and 2008:-

Table 4.10:- Changes in Contractors' Overseas Focus from 2004 to 2008

	<i>2004</i>	<i>2008</i>
Greater China incl. Taiwan, HK, Macau & China	9 out of 9	12 out of 12
South East Asia incl. Philippines, Vietnam, Australia, Malaysia, etc	1 out of 9	5 out of 12
South Asia incl. India, Pakistan etc.	1 out of 9	1 out of 12
Middle East incl. UAE, Qatar etc.	2 out of 9	5 out of 12

From these data it is evident that more HK contractors are expanding their overseas business beyond Southeast Asia and extending to South Asia and the Middle East. However, the significance of this is unclear. The change in the turnover of the medium to large HK contractors in cross regional business of the companies between 2004 & 2008 is shown in Table 4.11. It is clear that the cross regional business was becoming more important.

Table 4.11:- Change in HK Contractors' Turnover in Cross Regional Business

	2004	2008
Kwan Shing (Small)	80%	70%
Lam Construction (medium)	20%	30%
Leader Construction	10%	15%
Shui On Construction	10%	30%
China State Construction (HK)	30%	50%
GME (small)	50%	30%
Hip Hing Construction	-	50%
Wang Lee (Small)	-	55%
Chun Wo Construction	-	20%
Build King	-	15%

Table 4.11 shows that HK contractors were still falling far behind Mainland Chinese and Taiwanese contractors in their expansion of construction business overseas. In realistic terms, the HK contractors were just commencing their overseas construction business development and were comparatively 'green' in their understanding and operational experience. Hence the contractors were still a long way from 'real' or established international contractors able to compete in the international construction market. In 2000, Engineering News Record, (ENR), listed 17 Chinese-based construction companies including Taiwan, Hong Kong & Mainland China, privately or publicly held, in the Top 225 Global contractors. In 2008, ENR listed 27 Chinese-based construction companies including Taiwan & Mainland China, privately or publicly held, in the Top 225 Global contractors. No Hong Kong contractor has been listed in the ENR Top 225 Global contractors or ENR Top 225 International contractors since 2003. The figure for Taiwan has reduced from 2 contractors in 2000 to only 1 contractor in 2008. Hence it can be seen that the number of contractors from China Mainland has increased in the ENR Top Global contractors list by 12 during this period. It is evident that although Hong Kong contractors are very well exposed to international construction compe-

tition their total revenue is focused on the Hong Kong market and they are not aggressive in carrying out construction business overseas.

Interestingly, based on questionnaire Section B item 3, 75% of the interviewees believed that the development of overseas construction business to be a prime factor to secure sustainable development of the Company. The reasons why they believe they need to consider overseas construction business development are: (1) Hong Kong construction market insufficient for survival (83%); and (2) opportunities provided by other markets (75%).

From the point of view of company size, it is noticed that the surveyed medium to small HK contractors are all very aggressive in participating in cross-regional business expansion. Through discussion, it was noted that the reason for this was that 'the boss' is the decision maker; and once he is convinced, he will devote himself to the cross-regional construction business. However for large HK contractors it is noted that the scale of their cross regional business was expanding. All the companies were responding in the same way: the shrinking Hong Kong construction market and resulting tight margins had become the main driving force for them to expand their construction business to Greater China and overseas.

4.4.3 Market Entry Survey

From the market point of view, the majority of the interviewees basically believed that the Macau construction market would only be buoyant in the medium term; but also that the China construction market, whilst huge would be very difficult for HK contractors to enter. Expanding to overseas markets was in doubt as they only intended to pursue definite opportunities provided to them either through their own mother company or by business partner(s). Two of the interviewees commented that the large HK contractors

tend to be managed by executives entering their 50's, most of whom are unwilling to take up the responsibility of leading their teams to explore unknown construction markets. Only one HK contractor had a different approach; China State Construction International Holdings Ltd. ("China State"). China State had decided to secure business overseas and had penetrated the UAE and India construction markets without having any pre-existing alliances.

When reviewing the targeted market criteria, the interviewees show quite diversified perceptions as they were affected by company strategy. For example, two companies following mother company guidelines considered that the questionnaire raised considerations that were irrelevant or not important. The majority of the remainder was relying on opportunities for business facilitated through existing relationships or through knowledge gleaned from visits and surveys by in-house staff in order to ensure the market has good margin potential. The importance of the market size and perceived market potential appeared to be less of a consideration. This indicates that the HK contractors are comparatively short-sighted in their overseas business development. This seems to be borne out in the interviews recorded in Table 4.12.

Reviewing the HK contractors' concerns in the target overseas markets, more emphasis is evidently placed on aspects of the legal and taxation systems (See Table 4.13). Yet, it is interesting to note that language barrier is ranked as "very important" by more than half of the interviewees. Communication and working with locals was also considered as "very important" by many interviewees.

Table 4.12 Comparison of Market Considerations 2004 & 2008

Importance of Consideration	2004			2008		
	Very Important	Important	Com-bined	Very Important	Important	Com-bined
political stability	60%	20%	80%	75%	8%	83%
size of the market	47%	47%	94%	42%	33%	76%
potential of the market	54%	40%	94%	58%	25%	83%
Easy entry due to existing "guanxi"	20%	60%	80%	33%	58%	91%
Excessive resources within organization	7%	27%	34%	8%	25%	33%
Market known to have good margin	13%	60%	73%	75%	17%	92%
Visited and knew the market	53%	33%	86%	75%	17%	92%
attractive policy of the area	33%	47%	80%	25%	50%	75%
Security of target market				50%	33%	83%

Table 4.13 Market Difficulties Considerations

Importance of Consideration	Very Important	Important	Combined
Inadequate legal system	42%	50%	92%
Taxation complexity	25%	67%	92%
Modernization of country	-	67%	67%
Hygiene of Country	-	67%	67%
Language barrier	58%	17%	75%
Cultural Difference	17%	50%	67%
Trade Union strength	25%	42%	67%
Communication difficulties	42%	33%	75%
Working w/ local people	50%	17%	67%

When considering human resources aspects, the HK contractors regarded the parameters set out below in Table 4.14 as important. However, leadership was ranked as the highest prime success

factor for overseas business expansion, followed by remuneration incentive, critical in attracting people to work overseas.

Table 4.14 Core Capacity Considerations

Importance of Consideration	Very Important	Important	Combined
Technical competence	42%	58%	100%
Commercial competence	67%	33%	100%
Management competence	75%	25%	100%
Leadership abilities	92%	8%	100%
Communication ability w/ locals	75%	25%	100%
Authority delegation	50%	50%	100%
Adaptability	25%	67%	92%
Remuneration incentive to staff	83%	17%	100%
Motivate right staff to go overseas	67%	25%	92%

When mobilizing Hong Kong staff or recruiting new staff to work overseas, the interviewees believed the most important concern to be the remuneration package, followed by career development and family support. Other aspects were considered important but are not the critical issues. The result is shown in Table 4.15. (In the questionnaire there is one question set in a very bad way and hence no answer is required for this question. The questionnaire is disregarded in this study.)

When reviewing interviewees' understanding of the concerns of their staff working overseas, the prime concern was the working relationship with local partners and also communication with locals. Other concerns including language barrier, working relationships with locals and working with local subcontractors, were all important but not the prime concern. The result is shown in Table 4.16.

Table 4.15 Considerations of Staff Working Overseas

Importance of Consideration	Very Important	Important	Combined
Remuneration package	83%	17%	100%
Annual leave	-	92%	92%
Resident together w/ family overseas	8%	67%	75%
Children's education	8%	50%	58%
Career development opportunity	58%	25%	83%
Working environment	25%	67%	92%
Living environment	18%	67%	75%
Family support	67%	25%	92%
Not considered	-	-	-

On information exchange, the most effective medium is thought to be e-mail, followed by ITC systems: web-based phone, video conferencing etc. There were concerns about the stability of internet connections and web-based internet platforms; but the importance is less than the availability of such systems.

Table 4.16 "Guanxi" Considerations

Importance of Consideration	Very Important	Important	Combined
Communication w/ locals	67%	33%	100%
Language barrier	50%	50%	100%
Working relationship w/ locals	58%	42%	100%
Working w/ local subcontractors	50%	50%	100%
Working relationship w/ local partner	83%	17%	100%
Working habit difference	33%	58%	92%
Professional incompetence	42%	42%	84%
Cultural difference	17%	67%	84%
Discrimination to foreigners	17%	58%	75%

While reviewing these concerns, it was also noted that the specific construction specialty and strategy of individual companies will affect their concerns to different degrees. For example, the communication needs for civil and marine works were seen as less significant compared with the needs of major builders where supply

chain communication and local connections are becoming very important. Furthermore, companies who were following the development of their holding companies had little concern with entry mode strategy. On the other hand, the shrinking Hong Kong construction market had become the one key factor driving HK contractors to seek opportunities outside Hong Kong. The reasons and means of entering the China construction market compared with entering other international markets outside the 'greater China region' were very different. The Greater China construction market including Macau, Taiwan and Mainland China was market driven. Contacts ('guanxi') existed among people living in these regions. The historical background and family relationships built-up among Mainland Chinese, Macau people, Taiwanese and Hong Kong people can be traced back hundreds of years. In addition the similar culture with minimum dialect barrier and virtually zero reading difference means that communication was an unimportant concern. However, when working outside Greater China in the international markets, culture impact, communication, and language are becoming the prime critical obstacles to the development of the company. Even in the English speaking countries, it is noted that the accent of locals, India for example, are not easily and thoroughly understood: a swing of the head in India means "understood" or is an acknowledgment; but it is easily misunderstood as a rejection for Chinese.

4.4.4 Risk Management Survey

The questionnaire asked the interviewees whether they consider opportunity more important than risk. The manner of the question caused them to consider carefully their response. Among the 12 surveyed, 5 answered "yes" and 6 answered "no"; but one answered "both"! All but one of them responded that there should be a balance between risk and opportunity even though wording it differently. Francis Fok, the managing director of Kwan Shing said during the interview, "Only taking opportunity can resolve risk."

Sammy Zhou, CEO of China State Construction International Holdings Ltd., also said, "Market opportunity and luck provided China State the chances to expand to India and Dubai which are important elements of our overseas business development."

For overseas business development, this is a very interesting question. In expanding business to a totally alien country or district, one cannot succeed if there is no opportunity. Yet in cases where risk assessment is not exercised carefully, the expansion operation will fail. In cases where risk has always being amplified and considered as the more important element, the company will find it very difficult to develop its overseas business. This is because there are always easily identified risks around which effective solutions that cannot always be raised with confidence. Opportunities can also be observed but it is also difficult to justify or guarantee their success. Hence, opportunities (as spelt out in question 11 in Section B) and risks (as spelt out in question 12 in the same section) should be compared and considered with extreme care. Some interviewees did ask the differences between questions No. 11 & 12; but the researcher did not provide an answer to them. When mobilizing resources to overseas markets, responses to question nos. 14 & 15 spelling out the strength of and opportunities provided to the staff may be compared to the responses to question 16 which attempted to set out the risks. Opportunity should be taken if capacity permits, rather than allowing the risks to dictate: risks can be mitigated and calculated whilst capacity is the core competence, owned and difficult to replace.

In the survey, all HK contractors interviewed claimed that they undertake risk management in: (a) deciding to expand overseas business; (b) deciding to launch their business in a particular country; (c) tendering for projects; and (d) executing projects. All of them also followed tender management procedures to ensure proper tender control. However, when asked if they used the same procedures for local and overseas tenders, the answers

were diversified, with 8 saying 'yes' and 4 'no'. The ones saying 'no' basically said that the procedure was amended to suit the local conditions.

From the researcher's perspective, tender management procedures for Hong Kong and cross-regional projects are different. For international contractors, overseas tender approval is usually controlled by head office top management; and hence the justification on contract risks, technical risks, partner risks, payment risks, legal risks, exchange risks etc could be addressed differently from country to country, with timing also being a factor. It is rare that tender responsibility rests solely with the branch office in the region. From the survey, it appears that all Hong Kong contractors are still using Hong Kong practice as their base. This indicates that their mindset is still bound up in traditional Hong Kong practice, without due consideration of issues relating to wider international construction risk management.

In the risk management survey, the answers were diversified mainly because of the different approaches taken by each contractor. The executive director of Shui On said, "Our projects are following the Group development and 'trust' is more important than risk assessment." His comment is certainly valid but in general deviates from the common sense of construction contracting practices. The survey results on risk management concerns are set out in Table 4.17 below. Contract risk, alliance risk and resources risk seem to take higher priority over the others. Tax risk generally raises less concern.

Table 4.17 Risk Considerations

Importance of Consideration	Very Important	Important	Combined
technical risk	25%	58%	83%
Contract risk	75%	17%	92%
Alliance risk	58%	25%	83%
Payment risk	67%	25%	92%
Tax risk	8%	67%	75%
Legal risk	25%	58%	83%
Supply Chain risk	42%	50%	92%
Resources risk	67%	25%	92%
Financial risk	58%	33%	92%
Management Risk	58%	33%	92%

In China State's experience in India, tax risk, legal risk and commercial risk of a contract were very important. China State had experienced such risks during the execution of the Hyderabad International Airport Passenger Terminal Building project. This experience is not described in detail in the case study of China State because this became more apparent during the execution of the project and not during the pre-contract stage. In the pre-contract stage, the company carried out very careful risk assessment of tax risk, legal risk and commercial risk of a contract as they spent more than three months in contract terms negotiation, word-by-word negotiation prior to the signing of the Hyderabad Airport EPC contract. However, this still appears to be another indication that HK contractors are not yet fully prepared to compete in international construction markets as their perception of risk is still based on their known (local) market. Refer to the survey result shown in Table 4.17.

All the surveyed contractors claimed to be satisfied with their performance and effectiveness in tender management. Based on the fact that they were working in a limited number of countries on

projects either provided by “opportunity” or following their mother company’s development, it is not easy to test the real effectiveness of their tender management procedures. The researcher believes that the only Hong Kong company that is known to carry out overseas business development without any prior alliance or mother company assistance is China State. Hence the test of China State’s tender management model may be a good indicator of potential success in tender management for Hong Kong contractors generally.

4.4.5 Expectations of the Hong Kong Construction Industry

The survey revealed that the Hong Kong construction industry had reached a point where sustainable development in the local construction market was considered to be very limited. HK contractors were being forced to find new business opportunities as a way to survive. Amongst the opportunities available are the opportunities of working overseas in markets currently experiencing or expecting continuous growth.

What other choices were available?

Nearly all the HK contractors surveyed considered Hong Kong government assistance and encouragement to be important in assisting their company development (see Table 4.18). They indicated that they would continue to lobby the government in providing any kind of available assistance. (They were however convinced that the government will not take any action.) All the companies considered that they had to rely on their own strength and resources. Whilst they considered the boom in Macau construction as important and good for Hong Kong contractors in the short term, they all had doubts as to its long term sustainability. On the other hand, the boom in the China construction market was not considered as of much assistance to HK contractors because that market is very difficult for HK contractors to penetrate. The

South East Asia construction market was considered as an opportunity; but most of the interviewees considered that penetration, again, is not easy. The importance of Middle East markets was high and is in second place after the Macau the Middle East was seen as the 'hot' construction market. It was clear that HK contractors were considering the Middle East as a potential construction market for them. As indicated in both these surveys, the booming market plus good margins and low taxes were major attractions to HK contractors.

Table 4.18 HK Contractors' Considerations of Market Situation

Importance of Consideration	Very Important	Important	Combined
Industry lobby group	33%	50%	83%
Gov't fund to help industry	50%	17%	67%
more PPP/BOT project in HK	17%	25%	42%
enhance HK contractor ability	17%	50%	67%
China market boom	8%	25%	33%
Macau market boom	50%	33%	83%
SE Asia market boom	17%	33%	50%
Middle East market boom	42%	33%	75%
Europe market boom	-	17%	17%

Most interviewees considered that forming an alliance between HK contractors would be advantageous for overseas development; but they also worried that each company had their own agenda and also questioned whether perceived synergy would actually be achieved. It is interesting to note that HKTDC (Hong Kong Trade Development Commission) had been the most proactive government department with respect to overseas business development and had led and organized several trips to the Middle East for HK contractors to research and become familiar with the market potential. However, whilst the HK contractors believed that government assistance was important, they did not believe that the Hong Kong construction industry will take advantage of such assistance. The result of the survey is shown in Table 4.19.

Table 4.19 Assistance Considerations of HK Authorities

Importance of Consideration	Very Important	Important	Combined
HK Gov't leadership	8%	58%	66%
HK Gov't financial assistance	42%	17%	59%
HK Gov't insurance guarantee	50%	17%	67%
HK Gov't incentive scheme	25%	42%	67%
HKTDC leadership	-	83%	83%
HKCA leadership	8%	50%	58%
HK contractors alliance	25%	67%	92%
HKTDC/HKCA intelligence	-	50%	50%
HK Gov't leadership	8%	58%	63%

4.4.6 Conclusion

The survey in early 2008 provided a review of HK contractors and their perspectives with respect to expanding their business overseas. From the integrated survey interviews, it is noted that apart from China State Construction, the large Hong Kong contractors did not have a long-term vision to expand their business overseas. They were seeking short-term advantages to overcome and survive in the shrinking domestic market. This could be observed by the fact that most of the contractors do not consider market size and market growth as one of their critical overseas business development factors. It is argued by the researcher that the chance of HK contractors successfully develop themselves to become international contractors was 'slim' because they are generally lacked drive and long-term vision.

With the view that the HK\$250 billion stimulus plan of Hong Kong government had promised to launch to the Hong Kong construction market for 10 years commencing in 2008, the Hong Kong construction market may be expected to experience another boom period similar to the construction market boom in 90's that was induced by British colonial government before Hong Kong returned

to China in 1997. The domestic opportunities for HK contractors will further lead the contractors to focus in the domestic market and neglect the importance of the international market.

The Hong Kong construction industry has reached a point that continuous development in the local construction market was becoming very limited. Hong Kong contractors are forced to find new business opportunities as a way to survive. The available opportunities from the local market are quite limited and construction market opportunities in Macau, China and South East Asia appeared to be of little potential or not sustainable. The remaining opportunities for working overseas in markets currently experiencing and expecting to have sustainable growth were becoming more important to HK contractors. The 2008 follow-up survey to HK contractors revealed that contractors had veered away from cross-regional construction markets within Greater China; and that they are now starting to investigate and to develop their construction business elsewhere overseas. However, the limitation of courage and experience in overseas construction markets, plus the difficulty in mobilizing staff to work overseas was still preventing HK contractors from becoming real international contractors able to compete on the world stage.

The establishment of a structured approach for HK contractors to become real international construction contractors was becoming an urgent, practical need. In the event that HK contractors remain in their present situation and try to survive within the cyclic Hong Kong construction market, the prospects for HK contractors in enhancing their capacity to be capable to compete with international construction market and securing sustainable development through globalization are definitely not optimistic.

4.5 Follow-up Case Study – Hong Kong Based international contractors' regional business development and tender management in 2008

4.5.1 Introduction

By 2008, the targeted markets of China State had changed significantly when compared with 2004. This chapter provides details of a follow-up study of Hong Kong based international contractors' regional business development and tender management as at the end of 2008. This study augments the survey of contractors undertaken early in 2008. It provides details of the international business performance of China State Construction in 2008 and compares this with the overall business activity in the Hong Kong and international market sector. It reviews the overall business development strategy of China State in relation to the period since 2004 and in the context of the global economic events of 2008.

4.5.2 2008 Construction Market Review

The HK construction market started to re-gain its momentum in 2007. The key change occurred when Mr. Donald Tsang (2007), the Chief Executive of Hong Kong, announced that the Hong Kong Government would bring forward 10 major infrastructure projects totalling HK\$ 250 billion. These projects were additional construction projects over and above the projects previously announced. The aim was to boost economic activity and improve the living environment in the coming 10 years. As reported by Business Monitor International (2008), the HK construction market was expected to have an average annual growth rate of 0.82% over the 2008 – 2012 periods.

At the end of 2008, it was announced that most of the projects are well on track. Even though the programme of works had been seriously impacted by the financial turmoil occurring in the third

quarter of 2008, it is envisaged that the implementation of the 10 major infrastructure projects will provide challenges & opportunities to the contractors and have a major positive impact on the Hong Kong construction market. This implication was that Hong Kong may be able to enjoy a ten year period of construction market boom.

It is observed that, after the 5 year construction boom, the Macau construction market had slowed down, mainly due to perceived over-development and a reported scandal involving the secretariat for Transport and Public Works in Macau i.e. Mr. Ao man Long. However, Edmund Ho (2008), the Macau Chief Executive, announced that the government is going to invest 10.2 billion Patacas (HKD 10 billion) in the public works sector in order to stimulate economic growth and to help overcome forthcoming potential difficulties in the region. It was therefore expected that the Macau construction market would maintain its momentum.

In comparison, the Mainland China construction market remained overheated. Even with the shock of the financial crisis in Q3 of 2008, China had announced that they intended to maintain their GDP growth rate in 2009 to remain at 8%. Xinhua (2008) reported that the Chinese government intended to invest some 600 billion RMB (88 billion USD) in railway development which would be part of the 4 trillion RMB stimulus package announced by the government in the end of 2008.

The construction markets in India and UAE had displayed substantial growth. Obetkon (2008) reported that the Indian government had set aside 492 billion USD for infrastructure development in their 11th 5-Years Economic Plan in 2007. Furthermore, the Indian construction industry, a key growth driver for the Indian economy, had contributed on average 6.3% of the GDP. The current Indian construction market size was approximately 70.8 billion USD. The Australia Government (2008) reported that the

UAE construction market contributed on average 7% to the overall GDP; and the growth rate of UAE construction market between 2008 and 2012 was anticipated to expand at an average rate of 5%. However, owing to the global financial crisis in Q3 of 2008, both India and UAE were suffering a similar economic impact most other parts of the world. Franklin (2008) reported that the Indian government had announced an investment of a sum of 200 billion INR (4.14 billion USD) in a stimulus package including infrastructure investment plans. At end November, 2008, Sikarwar & Prasad (2008) reported that the Indian government had additionally announced a 50,000 crores INR injection (approximately 85 billion HKD) to fund key infrastructure projects for both private and PPP projects in India. It was observed that the Indian Government clearly recognized the problems facing them and was determined to continue their investment in infrastructure development. MEED (2008) reported that the total volume of projects in UAE, including those planned and ongoing, for the whole of 2008 had basically been increased. Particular concern has been placed to the volume of construction work after the world financial 'tsunami'. The weekly figures, between September and end of December 2008, indicated that there was a slight reduction in volume. Yet the figures of MEED in early January 2009 indicated that there is a sharp slow down of the projects including both planned and underway projects. This indicates the information provided by media of UAE is not very transparent and may be misleading. However, Hindley (2008) reported that the total contracts awarded in UAE have dropped from 87 billion USD in 2007 to 82.6 billion USD in 2008 (first 10 months). Based on pro-rata calculations, this indicates that there was still an increase in 2008. Notwithstanding any adjustment in the UAE construction market, the market volume in UAE, assuming that the awarded contract value was close to the market volume. (It is seen in comparison that this market is much larger than the Hong Kong construction market volume in 2007 which was about 11 billion USD.)

The construction market environment of the countries/regions on which China State has focused, the financial crisis in late 2008 notwithstanding, in general remained optimistic. This also indicates that the strategic overseas construction business development of China State had correctly selected the 'entry gates' i.e. the right countries in which to develop their business. The targeted construction markets remained optimistic. The financial crisis had resulted in uncertainties and unforeseeable risks; yet it was well understood and accepted that such uncertainties and risks would occur all over the world. The selected construction markets of China State remained the domain at construction markets irrespective of the globally depressed market conditions.

4.5.3 Results of the Hong Kong Based International Contractor

In accordance with the announced annual results of China State for the year ending 31st Dec., 2009 the turnover and performance were as shown in Table 4.20:-

Table 4.20: Result of China State in Year 2006 to 2008

		in Million HKD	2006	2007	2008	2009
Turnover	Hong Kong		7,509	5,502	6,182	6969
	Dubai		795	2,065	1,796	979
	India		454	351	77	11
	Macau		1,537	1,587	2,083	1625
Gross Margin	Hong Kong		3.3%	2.8%	3.7%	4.9%
	Dubai		2.6%	2.7%	3.2%	-1.9%
	India		7.3%	7.3%	5.5%	0%
	Macau		17.3%	16.1%	13.6%	14.9%

Note: Result of 2009 is provided only for reference

China State physically embarked upon its overseas construction business development in December, 2003. It had taken them one

and a half years, i.e. until mid 2005, to win their first project in both India and Dubai. The turnover in 2005 for both India and Dubai operations was negligible and the profit could not be booked into the Company account mainly because the turnover was far below 30% of the total project sum. Hence the overseas construction business turnover only started to appear in the company's annual report in 2006. In 2006 and 2007, the turnover of Dubai increased from 0.795 billion HKD to 2.065 billion, the turnover of India had yielded 454 million HKD and 351 million HKD respectively. This result reflects the decision that Dubai would be the committed market and India would be considered as a project based development market.

The turnover of China State in Hong Kong construction market had dropped from 7.5 billion HKD in 2006 to 5.5 billion HKD in 2007 owing to market shrinkage. As a result of overseas construction business development, China State was able to off-set the short-fall in turnover in Hong Kong through the turnover in Dubai and India. Furthermore, it can be observed from Table 4.20 that the construction gross margin had also increased in both Dubai and India. Through these results, China State has clearly achieved their original construction business diversification plan over the last 4 years and successfully diluted their risks in the different regional performance of construction business. However the down turn of economy in overseas market in 2009 has made the China State coming across the biggest difficulty after their expansion of overseas construction business. In particular, the construction market in UAE seems to deviate away from the role of the game of the international construction. Hence China State is forced to make provision for the UAE construction business. For India, the economic turmoil also induced "protectionism" where foreign contractors are reducing their opportunity in even participating in the India public projects. But it is clearly shown in Table 4.20 that the Hong Kong market is picking up. Further the China market, not

shown in Table 4.20, is also picking up. The growth of these two markets is able to compensate the shrank market volume of China State as well as the margin loss in these countries which will discuss more in detail in Section 4.5.5.1.

4.5.4 Hong Kong Contractors' Entry to Overseas Construction Markets

Through the survey in the first part of 2008, it was known that the Hong Kong Contractors had commenced their overseas construction business development. In the UAE, major Hong Kong contractors, besides China State Construction International Holdings Ltd., had commenced their overseas construction market penetration in 2007 and 2008. These included: Hip Hing Construction Co., Ltd. (entered through joint venture with local contractor); Chun Wo Construction Co., Ltd. (entered as a real estate developer and contractor) and Leader Construction Co., Ltd. (entered as marine works service provider). This was confirmed by a report in the Hong Kong Economic Times (2009) that Hip Hing, China State, Leader and Chun Wo are all working in UAE. In fact Chun Wo is developing and constructing their own properties in Abu Dhabi including construction work on the "Reem Diamond" and "Le Cube" (Chun Wo, 2009). There were also a number of specialist contractors (curtain wall specialists, structural steel erectors, etc.), material suppliers (steel providers, cement providers, sanitary-ware providers, etc.) and smaller contractors from Hong Kong that had entered the UAE construction market. Their scale of operation was not comparable with China State; but their activity indicates that Hong Kong construction industry services providers could be expected to continue to expand their business in the Middle East. There were also a number of architectural firms, engineering firms and quantity surveyors entering the UAE construction market. However, as previously indicated, this thesis will not discuss their entry to the UAE construction market.

India had a quite a different market situation. Up to end of 2008, China State had been the only Hong Kong construction contractor to have entered the Indian construction market. In the general impression of Hong Kong people, India was an unattractive place to work and it was generally believed that no Hong Kong staff would like to enter or even work in India. In 2007 & 2008, there are several architectural and engineering services providers who entered the Indian market. There were no contractors' organizations other than China State. However, there were two service providers including consultants, Ove Arup and architects, and IDA in addition to China State entered the Indian construction market working with China State on the Hyderabad Airport Passenger Terminal Building project. In fact, Voltas International, an Indian E&M contractor from the Tata group, who normally only works in international construction market, re-entered the Indian construction market as a result of the Hyderabad Airport project.

Besides India and UAE, it is noted through the author's surveys that some Hong Kong contractors were working in South East Asian countries. However, the scale of their operations was only on a project-by-project basis and they were not operating in the target countries on a long-term committed basis. In general, Hong Kong contractors were not very enthusiastic about considering working overseas. Even when the Hong Kong construction market was shrinking, contractors enjoyed the advantages of the nearby regional development that included Macau and Mainland China. Another interesting observation is that the volume of Hong Kong public sector projects and private sector projects is self-regulating.

Figure 4.10 shows the growth rate of the Hong Kong construction market in relationship to the growth rate in GDP. It also shows the growth rate of the public and private sectors in Hong Kong on a year-to-year basis. (All data are shown in Appendix K.) Fig. 4.10 shows a general trend in the Hong Kong construction market

where there is a downturn of private sector work in a particular year; there is an up-turn in the public sector; and vice-versa; i.e. there exists a regulating effect in the Hong Kong market.

Hence, following the financial crisis occur of 2008, it can be predicted that this regulating effect will again be in evidence, particularly with the Hong Kong government announcing their investment in the 10 new major projects. The private sector may therefore be expected to slow down under the impact of the financial crisis. This shows that Hong Kong contractors may once again overcome their shortfall in construction projects by the increase in government projects. This causes the HK contractors to review their overseas development plans as the Hong Kong construction market may absorb most of their resources i.e. Hong Kong contractors will again focus on their domestic construction market and reduce their enthusiasm in overseas business development.

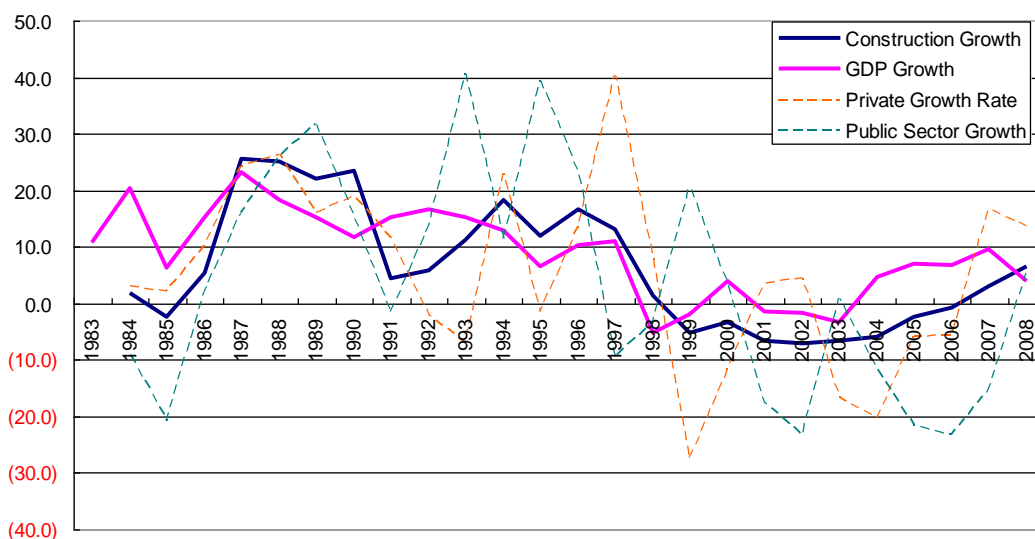


Fig. 4.11: Characteristics of Hong Kong Construction Market

Mr. Raymond Ho, the Deputy General Manager of Overseas Business Development Manager of China State described his view in the overseas business development of the company as follows: “The India highway project was executed by a joint venture with a local partner and the airport project by China State alone. We

have had to face different kinds of problems and issues for these two projects. The type of working and living environment for the highway project in rural area of India was totally alien to Hong Kong professionals. Hence we could only employ staff from Mainland China to work for this project. However the airport project was located in Hyderabad, the 5th largest city in India, the environment is similar to Shenzhen standard 15 to 20 years ago and we were able to recruit more than 35 Hong Kong staff and 10 Mainland Chinese staff to work there. In order to maintain and stabilize staff working in India, we have had to maintain better accommodation, facilities, (and even Chinese chef!) to provide better living conditions. Without doubt, the most difficult issue was cultural differences. There is a lot to learn by the Chinese and the Indian staff. It took a long learning time (more than 12 months) for them to get used to the working customs of the other party. Complains from Hong Kong staff were always similar including claims that Indian subordinates were not efficient and independent, they liked to discuss their problems but not solve them, etc. The Indian staff had different complains including Hong Kong staff. Claims were made that the Hong Kong staff did not respect them and the instructions given were not specific, etc. Such kinds of cultural conflicts definitely deteriorated the collaboration spirit of Chinese and Indian colleagues. The only way to resolve the problem was to educate and train them to be more understanding, patient and open minded. The lesson here was that one will not earn his respect unless one works with your heart. Unfortunately, this is more a social issue than an engineering issue. Without doubt, such kinds of social issue will determine the success of overseas business development. It is my view that the success of overseas development is dependent on pre-training of staff to work overseas; preparing staff psychologically to work overseas; the provision of a reasonable and attractive remuneration package; recruiting a competent local team; a good alliance; the leadership of the site management team and the required technical know-how. The most important of all these are the

support of top management as their understanding of the local difficulties and support in solving a lot of difficulties will be critical to the successful execution of the overseas projects.”

A major problem for Hong Kong contractors developing their construction business overseas is the human resources problem. In the overseas development experience of China State, it is noted that construction engineers are used to working in the Hong Kong construction market and are unwilling to change their familiar working environment for an alien working environment. This was not a problem only for China State but also applicable to other Hong Kong contractors expanding their construction business overseas. In the past experience of China State in their recruitment of staff to work overseas, there has been insufficient numbers of qualified staff willing to work in the overseas markets. The major and most commonly reasons stated by staff is citing family problems and preferences for developing careers in Hong Kong. Ms. Eva Leung, Assistant General Manager of Human Resources Dept. of China State and responsible for management and recruitment for staff working overseas, has commented: *“Before 2005, most of the job seekers (construction industry) tended to work in HK rather than overseas because there were plenty of jobs on offer in HK. HK people were hesitant to leave their families and friends and work in other countries. However, the situation has changed between 2005 and 2008 with a better understanding of the Dubai’s working environment, changing career opportunities, inadequate projects in HK, increasing eagerness to acquire overseas exposure, attractive remuneration package offered, formation of social group (HK people) in Dubai, etc. Nowadays, job seekers are more likely to accept an offer in Dubai. One of the most important criteria for taking up an assignment overseas is the candidates’ eagerness to complete an overseas project, improve his/her ability to manage multi-cultural team and develop a proven track record in relevant projects.”*

To assess the satisfaction of the company’s staff on both Hong

Kong and overseas projects, China State requested Hong Kong Polytechnic University to conduct an independent satisfaction survey to its employees in 2006. Some of the key findings are listed in Appendix L. The overall satisfaction score by China State Works Unit shows that the overseas unit has a higher score than the construction group operating in Hong Kong. Also the overall satisfaction score by location shows that India has a higher score than both Hong Kong and Dubai. In a general investigation of overall satisfaction among Hong Kong employees, it was found that an assignment outside of Hong Kong attracts the second lowest score. This indicates that Hong Kong employees, in general, are quite reluctant to take up overseas assignments. The area of investigation by location (see Table 4.21), however, indicates that India staff have high scores in all areas, including 'my job', communication, working environment, staff recognition, supervision, management & leadership and corporate culture. Assignment outside Hong Kong scores the lowest and is the lowest for all locations. This is a good indicator of the toughness of the staff employed in the Indian working environment. It also indicates that team work in India was good and that the working spirit counteracts the dissatisfaction normally attributed to working outside of Hong Kong.

Table 4.21: Overall Satisfaction Score for Areas of Investigation by Location

Area of Investigation	Hong Kong	Dubai	India	Overall Score
My Job	3.60	3.69	3.72	3.61
Assignments outside Hong Kong	3.26	3.31	3.21	3.27
Communication	3.18	3.11	3.29	3.18
Working Environment & Climate	3.48	3.37	3.66	3.47
Staff Recognition & Benefits	3.27	3.23	3.43	3.27
Supervision	3.63	3.59	3.77	3.63
Management & Leadership	3.56	3.63	3.78	3.57
Corporate Culture	3.40	3.37	3.64	3.40
Total	3.45	3.44	3.59	3.45

4.5.5 China State Regional Development and Tender Management Review for 2008

The study showed that China State had adjusted its development strategy in its overseas construction business development. In the beginning of 2008, China State had intended to expand their business to Abu Dhabi in UAE. In India, based on their successful and profitable experience, China State had intended to make a permanent commitment to the Indian construction market including the possibility of participating in the property development market. Unfortunately, these intentions were seriously affected by the global financial turmoil. At the end of 2008, China State was at the cross-roads in choosing their route for overseas construction business development. However as discussed in Section 4.5.3, the balance of different markets can reduce unnecessary risks and able to maintain the turnover and/or profit margin.

4.5.5.1 India

Referring to the execution of the projects in India, the profit secured of the two projects (Hyderabad International Airport Passenger Terminal Building project and MP 1 Highway project) is considered satisfactory by the China State Board.



Fig. 4.12: Hyderabad International Airport, India

Based on the valuable experience gained in the two projects, China State Board reviewed its development strategy in India and authorized permanent commitment



Fig. 4.13: MP1 Highway, India

in the country. The Company then conducted serious negoti-

ations with a local property developer, seeking to set up an equity JV construction company to carry out construction works for all the local developer's development projects. The negotiations were prematurely terminated due to a change in basic principles, previously agreed by the local partner. Furthermore, the Board believes that the India team has gained good experience and connections in India and hence requested them to review the possibility of entering the property development market. The feasibility study provided to the Board had received positive feedback. Unfortunately the global financial crisis seriously impacted the India property market and the down-turn in Indian real estate development seriously affected the confidence of the Board. As a result, the property development proposals have been put in abeyance. Although China State had maintained its interest in the tendering process after the above instances occurred, there has been a rise in protectionism in the Indian construction market. This is manifested in the requirement of certain Indian clients in the public sector for tenderers to provide auditor's verification of their project-by-project payment figures on a yearly basis with a defined wording format which is not common practice in the international construction market. This has been rejected by the main financial auditor organizations as impracticable and contravening official guidelines. Consequently, it has become more difficult for foreign contractors to become eligible to compete for major projects in India. Furthermore, in order to boost the local construction market, the Indian government has arranged for tender packages to become smaller so that more local contractors are able to participate in the bidding process. With the combination of these negative effects of the Indian construction market and their unsuccessful bidding record, China State was unable to win any new contracts in India for the year 2008.

It was strongly believed that the experience gained and efforts spent in the Indian construction market justify their continuation. Even if seriously influenced by a continuing financial crisis extending to 2009, the long-term development of India is considered to be positive. Hence, China State is intending to continue their construction business development in India and maintain close monitoring of the Indian construction market. The only reservation of China State is whether the construction management resources from Hong Kong and Mainland China will be able to support the development in India. This is mainly because of the general misperception of Chinese in Hong Kong and Mainland China that they prefer to remain developing their career in their homeland.

4.5.5.2 UAE

In 2008, there were to have been four projects completed in Dubai; but there is only one project completed i.e. the JAFZA Towers, the other three being delayed. The reasons for the delays were variously: extreme material escalation in 2007 & 2008, design changes, extra coordination for architectural & MEP works, labor resources shortage, subcontractor management and other management problems. For the year 2009, China State (2009) reported that the UAE construction operation recorded a turnover of 979 million HKD and a gross margin loss of 1.9%.

The worst is the Client is delaying payment and cause a large amount of unnecessary financial burden to China State. The Company has taken into the Dubai market en-

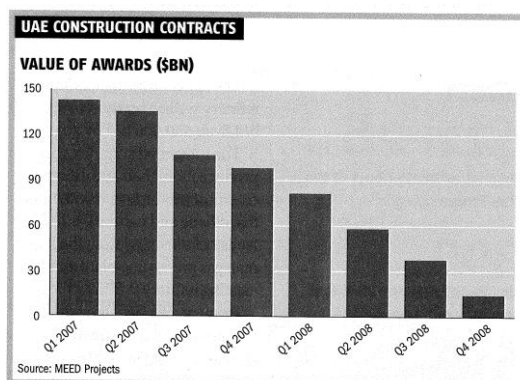


Fig. 4.14: UAE Construction Market change

vironment into consideration and decided to suspend all tendering in Dubai until further notice.

Despite the legal risks in the UAE construction industry already spelt out by Grose, (2006), the contractors in UAE are committed to engage in the “strong growing construction market of UAE”. Sukuk (2008) reported that Standard & Poors estimated that the construction and real estate sector accounts for almost half of Dubai’s gross domestic production (GDP). Hence the UAE construction market is one of the most important parts of UAE’s economy; and the situation is very worrying at the end of 2008. Foreman & Sell (2009) reported (see to Fig. 4.14) a drop of 60% in total contract award in UAE comparing the total contract awards of 191.8 billion USD made in 2008 with total contract awards of 482.5 billion USD made in 2007. A number of well-known projects including Dubai Waterfront, Dubail and and the Trump International Hotel & Tower, launched at high profile events in New York in June 2008, are on hold. The real estate market is absolutely quiet as there is no movement in buying or selling.

However, MEED (2008) also reported that the total value (defined as the total value of projects planned and underway) of UAE projects from September to December, 2008 is still in an upward trend. The information provided in MEED (2008) is in conflict with information provided by Foreman & Sell (2009).

The Dubai construction market faced a tremendous number of problems in the first half of 2008 including labour shortages, material escalation, soaring salary/wages and insufficiently qualified contractors. However at the end of 2008, the construction market in Dubai had changed drastically due to global financial crisis. Bains (2009) reported that it would result in labour oversupply, projects would be abandoned, late payment situations would increase, banks would tighten up financing of

projects, etc. The crisis has, from another prospective, brought a sharp correction in raw material and engineering / construction / procurement prices. The Dubai construction market has changed fast from a contractor's market to a client's market.

Facing such a turbulent and survival-orientated market environment, China State was forced to review their business development models in Dubai. Senior management believed that executing construction projects only in Dubai was becoming more risky; and it is necessary to seriously review entry into Abu Dhabi where the construction market is arguably less turbulent. It had come to the notice of the management that the market environment is quite different between Dubai and Abu Dhabi. The difference could be generally described as follows: Dubai is a free and open market whereas Abu Dhabi is more conservative and relationship orientated. It was necessary for China State to study the Abu Dhabi market more closely to decide on the entry mode and construction business development strategy.

4.5.5.3 Tender Management Review

In the year 2008, China State was not awarded any new contracts in either in India or UAE. Hence the tender management review for the year can only be justified through examination of the details of the tender results.

In India, there were several tenders submitted including the Chennai International Airport Passenger Terminal Building ("PTB") and metro stations at Bangalore. During the submission of the tender for Chennai International Airport PTB, a typical example of the tenders submitted by China State in India in 2008, the Kolkata International Airport tender was simultaneously carried out. The estimated value of each of the

above mentioned airports is over 2.5 billion HKD. In order to ensure the quality of the tender and gather the best & necessary resources to work on the tender, China State decided to give up the option to tender for Kolkata International Airport and focus only on Chennai International Airport PTB. The selection was based on the working environment of the cities and also on the readiness of tender preparation together with the response to tender queries. For Chennai, China State was the third lowest bid at a price of only 1.5% higher than the lowest bidder. Even though China State was unsuccessful, the result demonstrated that the tender was properly prepared. It is noticeable that the Indian partner's tender management had not improved over time. Their tendering group still believes that tendering is based mainly on experience and neglects to give importance to proper planning, quotation seeking, technical solutions and pre-contract coordination. The Hong Kong tender team has spent considerable time and effort in the coordination, technical solution, planning and comparison of quotations among domestic and international vendors. The Chief Engineer of China State, Mr. A. Duxbury, commented on the tender management of Chennai Airport as follows: - *"In this tender, detailed technical and other submissions were not required with the tender; and this tends to lead the local team to work on basic pricing using market rates, leaving technical problems to be resolved post award. The structural design was state-of-the-art and 'deflection dependent' requiring careful planning. China State was able to work with the local partner and subcontractors to bring international 'normality' to the tendering process. Experience from Hyderabad International Airport showed that the low bidders can be called in to give full presentations within days of the public opening; and this would have been possible here. The final results demonstrated that such attention to detail need not lead to higher pricing and allows the Team to 'hit the ground running' upon*

award.”

It was noted that the collaboration of the partners worked much better than the tenders they have submitted in 2004. Cultural and traditional differences can still be observed but these were considered manageable problems. The major difference that existed was in risk management. The width and depth of risk management was seriously underestimated by the Indian tender team. They had not prepared a tender preparation program or maintained a steady tender team for the tender. They had also have spent insufficient time in studying the details of the erection plan for the steel structure of the terminal building in an operational airport where access is totally restricted in the vicinity of the existing runway or airplane apron.

China State believed that there was still a considerable room for improvement in the tender management skill of the Indian partner. For the long term benefit of the partners, China State intended their intention to form a long-term alliance with its India partner in order to ensure the efforts in technical transfer and training to local engineers are not wasted. In Dubai, there several tenders submitted in the year 2008. A typical example was an alternative proposal for a 123 storeys high residential tower. The planning of the construction was focused on the time schedule. China State believed that an alternative design of foundations, adopting ‘top-down methods’ would speed up the project total construction period by at least 5 months. The shortened time period could be achieved if the diaphragm walls and piles, together with the structure, were all constructed by China State. However, China State later found out that Dubai has never adopted the ‘top-down’ method of construction for buildings. This was a brand new concept to the Dubai municipality and hence it would take quite some time for Dubai authority to recognize and approve this type of construction method. Approval would take up nearly all the five

months time saved. Consequently the Client did not accept the alternate proposal. This example highlights that due to the limited practical experience and knowledge of the Dubai local authority; tender submissions in Dubai generally adopt conventional construction methods. Alternative proposals in tender submissions are not usually accepted unless the alternative does not affect the design submission approval that is mainly controlled by the Dubai Municipality. From both the India and Dubai markets, it was noted that the focus was becoming less on entry risk analysis but more on technical and commercial risk management. The concerns on collaboration, cultural impact, entry strategy considerations were becoming less important. It is believed that this is mainly because of the satisfactory results of China State's performance in the execution of projects in both India and Dubai.

4.5.6 Impact of the Global Financial Crisis, 2008

This follow-up case study provides details of the overseas business development performance of the Hong Kong based construction company China State in 2008. This performance was impacted by the global financial crisis, which had a major impact to the global construction market. How did China State handle such financial turmoil? The data collected allows an analysis of the company's reaction to the global economic problem.

The total revenue of China State in 2009 was 11.342 billion HKD, a 2.9% growth against the revenue of 2008, which was 11.021 billion HKD. The net profit of CSCIH increased by 25.4% from 489 million HKD in 2008 to 613 million HKD in 2009. The cash on hand increased from 2.523 billion HKD in 2008 to 4.305 billion HKD in 2009. Part of the increase in cash on hand was due to a rights issue in July, 2009 which raised 1.37 billion HKD. Several governments announced their stimulus plan to help boost their internal economy during the global financial crisis. Such stimulus plans

also caused resulted in adverse side effect that is protectionism. India was a clear example. In September 2009 CSCIH had won the contract to build a medical college project, the first of a large package of 24 medical college projects. After China State won the project, the client announced just one week before the tender submission for the following 5 projects that no foreign contractors are allowed to participate. This clearly eliminated the opportunity of China State to participate in further projects.

In another situation, Dubai announced its adverse financial situation several months after the main financial crisis. Clients in Dubai were using all necessary means to delay their payment. Clients also tried to terminate many newly awarded projects. Contractors had difficulty in collecting their final payment for completed work as Clients frequently argued that the contractor did not perform as required then induced contract terms to deduct money from the final payment. This led to a number of legal cases or arbitration in Dubai. The study revealed that China State had one project in 2008 where the client had induced liquidated damages and rejected all claims for an extension of time. The case was eventually resolved in mid 2009 and all payments secured. This was fortunately the client had been the Dubai government who had conducted business with the contract. For China State, the downturn in India and Dubai led to opportunities in Mainland China and Hong Kong. The Mainland China construction market continued to boom because of the 4 trillion RMB stimulus plan and China State was able to take advantage of the projects that resulted from this government funding. The fall back of Macau, Dubai and India construction markets therefore had minimum impact to the overall performance of the Group. The management of China State believed that the adverse situation of the Indian and UAE markets were the results of the economic turmoil and not the international business development. The situation that occurred in India and Dubai was quite different but the cause of difficulties was the same.

Questions were raised to the management as to whether they would proceed in the same way if they are now backing to 2004. The answer was positive. Given the analysis and study to the markets, the decision to enter these nations would be the same. Market risk is unavoidable and company development should not be limited because risk is amplified. The key is to ensure risks are well managed and opportunities are handled with caution.

4.5.7 Conclusion

Reviewing China State's overseas construction business development, it is observed that the strategy set-up in 2004 remains basically in force. The market value in the target countries continues to generate sustainable development. Apart from occasional terrorist attacks in India, India and Dubai remain politically stable. The top management of China State had arrived at the conclusion that developing overseas business was the right choice. The China State Interim Report in 2008 reported that UAE (Dubai) segment resulted for 1st Half of 2008 had achieved a turnover of 945 million HKD with a gross margin of 5.5% and the India segment result achieved a turnover of 57 million HKD with a gross margin of 5.4%. In comparison with the results of the 1st half of 2007, UAE (Dubai) achieved a turnover of 907 million HKD with a gross margin of 5.3% and India achieved a turnover of 339 million HKD with a gross margin of 2.6%. It was noted that the performance of both India and UAE (Dubai) were satisfactory. Mr. K.P. Kong, Chairman of CSCIH, (2008) remarked, "the Dubai construction market fully displays the competitive strength in its ability to import Chinese labour and expand the Dubai market." He also remarked, "China State will closely watch and study the Indian market, mainly from an alliance strategic perspective, prudently and selectively taking part in tenders in respect of the construction contracting field."

The market-imperfection theory of Hymer (1976) & Kindleberger

(1969) explains that foreign enterprises are able to penetrate into countries due to consequences of imperfections in products and market. Firm-specific approach also explained the technology advantage (Caves, 1971), management capacity (McManus, 1972), financial factors (Aliber, 1970) and others where the advantages of a firm may become an important factor for developing its business overseas. Furthermore, the location-specific approach (Dunning, 1973 & 1977) also covered trade barriers, government policy concerns, market size, economic growth rate and local material & labour costs; and that these factors may encourage the firms to expand their business to overseas markets. The integration of market-imperfection, firm-specific and location specific approaches explains the essential elements that foreign investors are willing to take certain risks and expand their business abroad. In India, the approach of specific strategic alliance (Harrigan, 1988) is also applicable and integrates very well with the other three approaches. The resources-based approach does not explain adequately as the other four approaches in India business development but may be able to explain the self-performance approach adopted by the Dubai business development model. For the purpose of study in China State, the various approaches are applicable on a target country bases. Hence, it should be noted that a dynamic approach based on detailed studies of the target country's characteristics and detailed analysis with the business environment is of prime importance to overseas business development models.

After the review, study and analysis of the overseas business development situation between 2004 & 2008, China State management noticed that the business development in India and Dubai were ready for review and modification. The UAE office of China State was considering the expansion of business to the Abu Dhabi market so as to provide an environment for Dubai & Abu Dhabi to achieve complementary strengths and resource sharing. The management also intended to expand its operations from building

construction to cover also the infrastructure construction market. The award of the small District Cooling Plant project in Dubai is a trial to observe the execution capacity of CSCIH in this area. The Indian division of China State is considering expanding from infrastructure projects to building projects based on the market need in early 2008.

Notwithstanding the market reversals of late 2008, the intention to expand business to high-rise building construction is seen as a long-term strategic move. These strategic decisions were established based on dynamic monitoring of the business environment of India and UAE where the historic raw data of the company and collected information with thorough due diligence checks are collected and then compared with a review of the indicators i.e. the performance based results. Such revision of development models requires robust and forward thinking. Thereafter, further reviews and analysis shall be carried out in intervals as defined by the management. These revised strategic plans should not be carried out within a black-box and must adopt an open and reasonable approach to ensure the plans coincide with the goals of the firm. Reviewing the practices of China State, the data collection, indicator reviews, and analyses are systematically and regularly exercised. Hence the revision of the business development plan is in line with the latest market development. It was also noted that China State are reviewing their strategic development promptly when there is sudden market turmoil and that this is very important to enterprises in their overseas business development actions.

5. International Business Development Model in the Construction Industry for Contractors

5.1 Introduction

The long-term goals of any company are to survive and maintain its sustainable development. In order to reduce their dependence on the domestic construction market for survival, engaging international construction markets is the best option for Hong Kong contractors in order to mitigate the risks in focusing on only one single market and to balance market fluctuations. This is equally valid statement for any other country's contractors. Such activities will also enhance the size and market share of a company and thus securing survival and sustainable development (Akhter, 1995).

The top management decisions of a specific company on international construction business development include selection and identification of target countries and market segments. El-Higzi (2002) noticed that there is limited knowledge of international construction market entry studies. Despite the fact that academic researchers have difficulty in reaching an in-depth perception of the decision-making processes of any construction company, it is also well known that market selection is a highly complicated issue as it has to address a basket of interrelated parameters including the company's own capacity, project issues, market variables, global economic environment together with host country's political, cultural and economical factors. Oezorhon et al. (2006) critically points out that the many models developed by researchers for international market entry decisions have their limitation in their country-specific issue, assumptions, data collection & analysis, as well as solution proposals. Furthermore the selection by a company of an entry mode under its own resources or through acquisition of or forging alliance with local companies, other forms of development in the international construction business may be through foreign direct investments, project based operation, and competitive tendering (El-Gamal, 1993;

Andersen, 2008; Ofori, 2003; Kock et al., 2003). Any construction company that engages in international business development has to ensure that its participation in tendering to secure ongoing involvement in the target market.

This thesis argues that the whole process of business development in the target nation including Preliminary Scanning, Environment Scanning, Strategy Formation, and Tendering is the key to success to international construction business development.

This chapter explores the critical inter-relationship and integration of the above process to formulate a model for construction companies to develop their business in the international market. This model is presented and validated with data from the case study and the data collected as part of the wider research. The model is presented in the context of learning and knowledge based business development model.

5.2 A conceptual learning and knowledge based business development model : 'The Spiral Model'

Overseas business development is dependent on learning and knowledge. The knowledge required and the learning process adopted will depend on the target nation and the external environment. This external business environment will change with time as the economic cycle evolves and business opportunities emerge or recede. As opportunities emerge and are pursued knowledge of the market and environment is gained. A crucial contributing factor is the 'core capacity' of the company.

This thesis presents a conceptual model of overseas business development. This comprises a "spiral model" in which knowledge and learning increase over time. The model is shown diagrammatically in Fig. 5.1.

In Fig. 5.1, the spiral represents the width (X & Y axis) and depth (Z axis)

of the knowledge gained by the company in various stages. In respect of time, the knowledge gained will become wider and deeper in a similar shape to the spiral. The centre core represents the core capacity of the company and is considered constant. All elements of knowledge acquired will form parts of the spiral and the knowledge of these elements will increase their width and depth in relationship to time as further investigation and learning is undertaken by the organization.

The model is applicable to all companies, including Hong Kong contractors, who have rich experience in competing with international construction companies in their 'internal' market but have insufficient experience to compete with international contractors in the international market(s). The model shows that a company needs to gain its width and depth of knowledge of the target nation over a period of time. The knowledge required relates to the preliminary entry selection, strategic planning of entry, and implementation including entry, tender and subsequent operations. All of these are critical to the success of overseas business development.

It should be noted that the knowledge gained will be wider and deeper in relationship with time. At the preliminary entry selection to tender stage the speed of gaining knowledge and learning is very high. The speed of gaining knowledge will however decrease after a period of time working in the target market. Hence the shape of the spiral might start to flatten out after the company commences its operations in the target nation.

Since knowledge is gained at such a high speed, the management of the overseas business development needs to be monitored and reviewed frequently and the decision making process will have to correspond to the speed of learning or knowledge gained. The management of overseas development cannot therefore be based simply on conventional management practices.

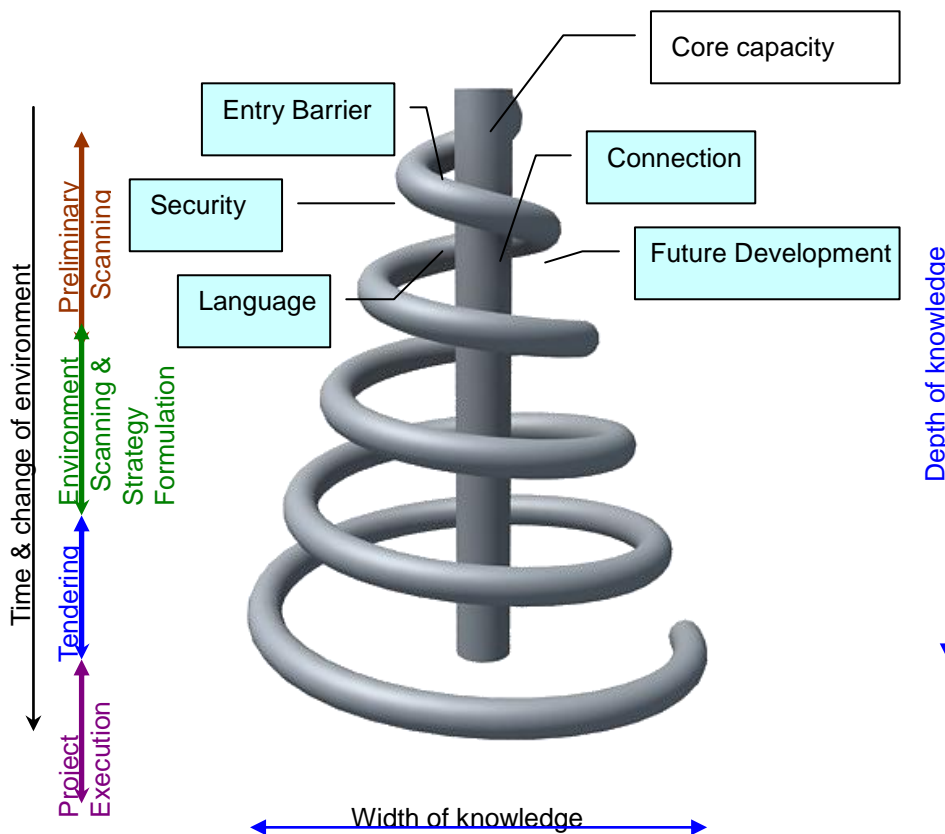


Fig. 5.1 - Spiral Model: a learning & knowledge based business development model

The knowledge spiral is always surrounding the core i.e. the core capacity of the company. The success of an organization in overseas business development will depend on this core capacity of the company and the ability of this core capacity to react to the challenges presented as new knowledge is acquired. This core capacity of the firm will also change over time, but can be considered a 'constant' when compared with the level and rate of knowledge gained and changes in the external business environmental during the pre-tender stage when market entry strategy is developed.

The knowledge gained and learning culture of the company should always be considered with respect to the core capacity of the company and in particular the ability of the firm to complete its strategic planning, decision-making process, tendering and construction. Any deviation or underestimate of the core capacity of the firm might induce a catastrophic outcome to the overseas business development operations of

the company.

Many management decisions in the development period may have been made based on insufficient or incomplete knowledge. A change in the external environment may require management to revisit earlier decisions because new events or new knowledge might have serious impact on the business development operation. Management has to revisit the knowledge gained and amend decisions based on the latest known situation or environment. In this regard, "dynamic management" should apply as the frequent review and decision-making adjustment may be so frequently required from time to time that conventional management theories may become too slow to respond.

Consideration of the model reveals the changing nature of the knowledge available and the rate of change of this knowledge particularly during the early phases of development. The company's senior management must realize that they may need to adjust the company's development strategy based on the feedback from front line staff. Front line staff will be much more sensitive to the changing environment than those management team members in their home country.

In summary the model presented comprises the following characteristics together with their corresponding component elements:

- (i) it must be clear that the goal of the organization should include, but not limited to, the long term vision and organizational target;
- (ii) time is the primary characteristic of the model with the understanding that the process of business development is executed in a specific period of time and it is important to recognize that all elements are subject to change related to time;
- (iii) the process of identifying and understanding of the uncertainties/risks arising from the multi-dimensional external environment includes, but is not limited to, industry competitive provision, external business environment, political environment, economic environment,

cultural factors, market competitiveness, local knowledge, local relationship, language barrier, entry barrier, future development opportunities, resources availability and technical capability;

- (iv) the process of an accurate recognition and analysis of the internal environment that includes, but is not limited to, the core competence, technical ability, financial resources, human resources capacity, management capability and risk management ability of the organization;
- (v) the process of identification, learning, review, assessment and decision making in strategic formation through the integration of the above mentioned external and internal environment that includes, but is not limited to, the entry mode selection, matching of entry selection with core competence, knowledge gained, evaluation of strategic planning, adjustment of planning and control of strategic planning; and
- (vi) the practical process of primary testing of the strategic formation through participation of tendering that includes the reconciliation of all gained knowledge, preparation of technical & commercial offer and exercise risk management based on the requirement of the tender.

This overview of the model is now examined in detail further with Section 5.5.2.1 and Section 5.5.3, and the factors that affect their development. The Fig 5.1 is actually an expanded combination of Fig. 5.9 and Fig 5.10 as discussed in the Section 5.5.2.1 and 5.5.3. First it is necessary to consider the entry mode of the construction business within the overseas market.

5.3 The Entry Mode of the Construction Business

The modes of entry of construction organizations have been studied by numerous researchers. Their views are presented and discussed in the literature review.

In the construction industry, new market entry takes place by adopting a variety of entry modes. The entry strategy of a company may be based on:-

- chance observations in the target country (market imperfection approach);
- the strength of the company (firm-specific advantages approach);
- location advantages (location-specific advantages approach);
- forming alliances with local companies in complementing their lack of local knowledge (strategic alliance approach);
- resources advantages (resource based approach); or
- integrating the social environment with company capabilities (conceptual model of contingencies).

Each of the above mentioned entry modes are associated with different levels of technical input, resources commitment, investment risks and management capabilities. The larger the operation in international business involved, the higher the commitment of resources. Furthermore, the higher the level of resources committed, the higher the investment and management risk. The economic environment is a very important element affecting the construction company's development. Yet the influence of the company's resource capacity and management capability are also critical factors for the company's international business development. No matter how attractive the target country in its economic environment, a company without sufficient and efficient resources, technical capability and management capacity is unlikely to be successful in their international construction business development.

Following the literature review, the studies of Hong Kong contractors, together with the tracked overseas construction business development experience of from the case study the entry mode for contractors is seen as a staged process that commences with a preliminary entry selection,

includes a market selection, and is followed by consideration of the anticipated contractor capacity in the selected market.

Each of these aspects is now considered.

5.3.1 Preliminary Entry Selection

Before reviewing the strategic choice for foreign market entry, the company has decided on its preliminary choice of target nations for international business development. There may be many countries in the world that appear to offer economic reward, and each will have its own pros and cons. If the company is not following a specific client to start business in a foreign country, how does it select the target nation?

There are many factors that need to be taken into consideration by the management. The company should focus on the prime elements that the foreign market can offer and what the company can accept. The important criteria for international business expansion amongst the many factors noticeable in the foreign markets are, but not limited to, the following five key elements:

- (1) language barrier,
- (2) connectivity with home nation (head office),
- (3) future sustainable development,
- (4) foreign entry resistance, and
- (5) safety.

These five elements must be examined in the target nation(s) and should be considered together with the strength of the construction company:-

5.3.1.1 Language barrier

This is probably the key element for an organization when they expand their operations to foreign market(s) for the first time and explore what the target nation is offering. Miscommunication is the most commonly observed problem for any international operations. In the event that language is a barrier, communications will always need to be carried out through an interpreter or by translation. In any business discussions, exact understanding of the contract or expression through verbal words during any negotiation is of the utmost importance. There are always problems for the translator or interpreter in providing the exact meaning of the sentences or written text of a contract. The true and in-depth implication of the words or text can hardly be detected by the person in charge where a language barrier exists. Words such as “you must do this” to emphasize the importance of following the procedure of an operation may be construed as a formal order and hence generate an atmosphere of conflict. This example also indicates the importance of cultural differences (Melin, 1992). Because of the language problem, some of the companies prefer to expand their business within their neighborhood region to avoid (1) cultural difference and (2) language barrier. Hence the initiators of international business will tend to select regions or nations more close to their home market so that the effects of language barrier and cultural differences can be minimized.

For the situation of Hong Kong construction companies, “nearby region” means China, Macau and Taiwan which all use the Chinese language. Here, even though dialects may be a problem, the written language has very little difference.

For construction business development beyond the greater China region, the language barrier is the first basic problem

that one can avoid amongst the many cultural differences, thereby removing it as a hindrance to communication. In fact, cultural difference has to be faced no matter which new foreign market the company is going to enter, even in the greater, mainland China region, cultural difference still exist.

5.3.1.2 Connection with home nation (head office)

Continuous communication and logistics are other important criteria of any company expanding their international business. Modern communication depends on ITC systems (Cheong & Baldwin, 2006). Mobile telephone networks and internet connections are now considered the most important communication tools. In the case where the target nation lacks such communication systems, the difficulties in communication with home office for decision making or support will be increased tremendously. Furthermore, logistical connection to the target nation is also important and this is important for both material/equipment delivery and transportation of people. In the event that the target nation cannot provide efficient logistics or communication systems, the development of the nation must be still very much ongoing. Hong Kong professionals may have difficulty in participating in the development of target nations as Hong Kong people may believe their basic living standard and protection cannot be guaranteed. In the case of sickness, the employees and their family in Hong Kong will be concerned about their evacuation to their home town and hence, the difficulty in mobilizing people to work in the target country can be extremely difficult. Hence it is the strong belief of the author that connectivity to the home nation for both information technology & communication and transportation connection is very important element to be provided by the target nation.

5.3.1.3 Future sustainable development

The target nation's construction market and its potential are totally dependent upon the macro economic situation of that nation. The construction market growth rate usually matches with, and is pro-rata to the growth rate of GDP. Probably the growth rate is more important than the market size because the market size, in the long term, is changing reflecting the growth rate. For example the construction market growth rate in India is about 10% per annum and is the highest growth rate of the world's construction markets. This indicates that the Indian construction market has a lot of potential and will be able to provide a sustainable development environment for a construction company. However, it must be remembered that there are other factors that will influence the company in deciding whether India will become their target nation including cultural differences, corruption, legal system, hygiene etc. But the author strongly believes that the long term sustainable development is a commitment that a company can give to the target nation provided that the growth rate is attractive.

5.3.1.4 Foreign entry consideration

Foreign entry consideration is a very important factor. If the target nation has established trading barriers for foreign investors or foreign construction companies, then no matter whether the target nation has the same language, high market growth rate and great connection to the home country, entry will become that much more difficult. For example, the developed countries in the West are open to any company that seeks to start business there. These countries are not however so easy to enter due to their high demand of knowledge in management, contract and technology. But from another view, they provide a very stable and less risky business environment.

Fig. 5.2 is a Risk Potential chart (Global Insight, 2004) showing risk versus opportunity. It is noticed that the developed countries usually have low risk and low growth whilst the developing countries have a higher risk with higher growth. What are missing here are the

under-developed countries. Here, it is obvious that the risk is much higher and opportunity may also be higher. Only when a nation needs the foreign company to enter and provides them with the necessary assistance, then the entry will become meaningful. Other resistance could come from religious beliefs, political, cultural and sometimes even historical factors.

Even China, which no longer sees itself as an underdeveloped country, but which is still the target for huge foreign investment, can react with surprising intensity on sensitive historical issues. A typical example is that CSCEC finished the iconic Shanghai World Finance Center in 2009, but not before strong objections were raised against the inclusion of the large circular aperture at the top of the building. This was seen as too much resembling the Japanese flag "Rising Sun". A state-of-the-art building was held up and huge costs inflicted and if the Japanese developer had not acted proactively and with sympathy (redesigning with a trapezoidal aperture) their future development in China would have been seriously affected.

5.3.1.5 Safety

This is another critical item because it applies to the security of

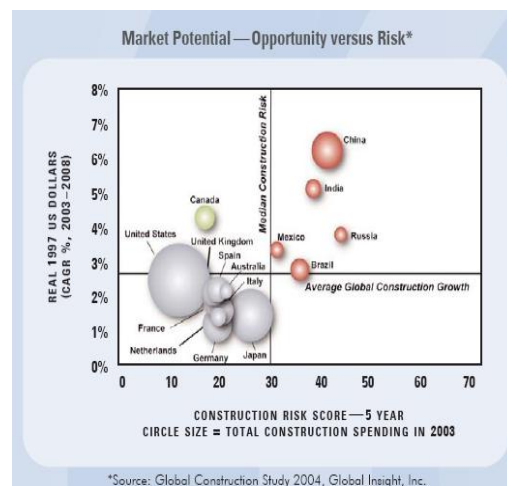


Fig 5.2 Risk Potential: Risk versus Opportunity

the lives of employees of the company. It is an important aspect for any enterprise to survive in any new environment. The company needs to ensure its human resources remain safeguarded. The support of the staffs' family or new staff recruited, or the stability of staff working in the nation will be affected seriously by the shadow of security if it becomes a problem. It is advisable that the construction company should preferably work in nations perceived as 'low risk'.

5.3.2 International Construction Market Selection

El-Higzi (2001) argues that the construction industry should be considered as a service industry. The service sector focuses on people interacting with people, the concept of a 'customer' and the servicing of the customer. The writer argues that the construction industry is part of the service industry and service is, in fact, the prime role of the construction industry.

Pride & Ferrell (1995) pointed out that with respect to international markets decisions depend upon the companies' strategic development and the needs of the target nations. The process of marketing involves on the process of analyzing the opportunities of alternative markets (Root, 1987), selecting the target markets (Root, 1987 and Pride & Ferrell, 1995), expanding the market mixture (product, place, price & promotion) and managing the marketing strategies (Assael, 1993). For the construction industry, Wheeler & Woon (1987) found that construction marketing should seek information on the economic environment, the client, the competition and take into full consideration receipt of supplies and equipment at the right time, in the right place and at the right price.

From the literature review, it is concluded that the internationalization process of foreign market entry is a step-by-step process with the commitment of resources increasing as the market and management knowledge of the target nation increases. This perspec-

tive is endorsed by Melin (1992) who argues that management decisions will change to suit the environment when the acquisition and mastering of target nation knowledge has improved. Hence the development of international business should commence from the nearest neighbourhood nations or regions so that knowledge differences will not be big and management is not required to experience major adjustment for these new, but nearby markets. Wei (1994), Minor et al., (1991) and Ahuja & Lampert (2001) note in addition that the entry mode is integrated with environmental issues, and consideration of competitors, market contingencies and the company's organizational strengths.

The relationship between these factors is shown in Fig. 5.3 which demonstrates that an organization's performance in international competition results from the interaction of environment, product, competition and organizational elements of goal and entry mode.

Besides the theories reviewed the literature review, it is noted that McKoll-Kennedy & Kiel (1999) conclude that there are four modes of entry to foreign markets: export, licensing, joint venture and direct ownership.

For the construction industry, export may be considered to include the export of technology, management and know-how. Erramilli & Rao (1993) argue that contractual transfer may be considered as licensing. Joint ventures, (a common entry mode); involve the company working in alliance with local construction companies in the capacities of technology, management, finance and joint decision making. Direct ownership applies to acquiring a local company as a subsidiary or establishing a wholly owned subsidiary in the target nation. Among the above modes of entry, the most risky and difficult one to achieve is 'direct ownership' even though this mode ensures that control and management decision making are be fully retained by the owner.



Fig. 5.3 - Conceptual Model of Contingencies (*Minor et al. 1991*)

In the construction industry, international entry modes can take several forms:

- through alliance with contractors operating in the target nation;
- through alliances with other international contractors;
- by providing specialist construction services;
- acquisition of local firms;
- project based entry;
- licensing;
- self-performing through competitive tendering;
- by establishing a wholly owned subsidiary; and etc.

A number of researchers (Strassmann & Wells, 1988; McKoll-Kennedy & Kiel, 1999; etc.) have pointed out that international contractors take specific precautions when entering new markets; and they will not ignore the importance of local knowledge. For medium and small firms, this is achieved by the format of licensing and project based exporting (El-Gamal, 1993).

The case study of the Hong Kong Contractor revealed that in their international business development, the company had reviewed and analyzed the Hong Kong construction market both in its sustainable development potential as well as its competitiveness. They had also carried out careful in-depth studies of the international construction market, including the business environment, local political steadiness, taxation application, market potential, local culture impact, security exposure and language proficiencies. They then undertook a SWOT analysis of their organizational capacity and reviewed their strengths in organizational structure, management capacity, resources support and technical proficiencies. Then they came to their conclusion from a strategic point of view and decided their preferred mode of entry. Their entry mode was dependent on the domestic business environment and the attraction of the business environment in the international market blended with the strengths of the company including its management, resources and technical capacities. They also took into consideration their own international management and construction advantages and the possible synergy in alliances with local contractors where local knowledge and relationship can be utilized.

This research argues that the inter-relationship of international market environment, home market environment, target nation advantages and organizational strengths is as shown in Fig. 5.4:-

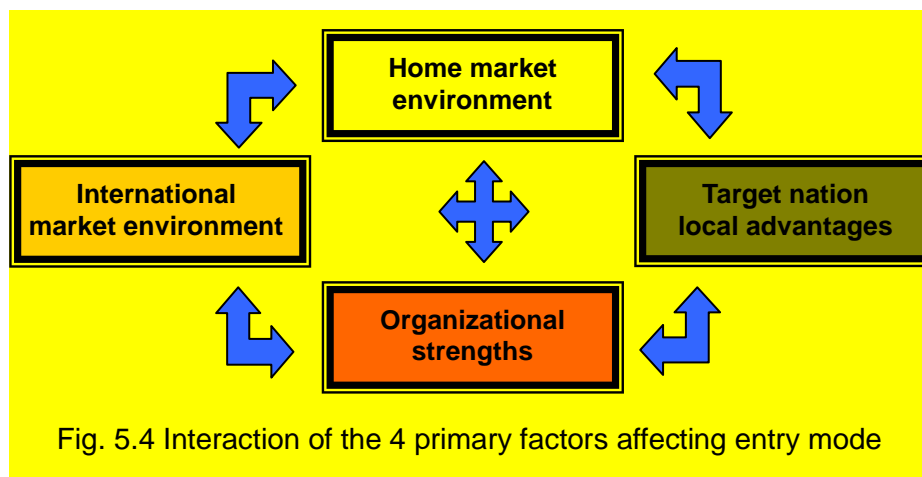


Fig. 5.4 Interaction of the 4 primary factors affecting entry mode

Fig. 5.4 represents the four primary factors affecting entry mode. The home market environment affects the survival of the company. The target nation local advantages represents the micro-market environment including, but not limited to, its GDP, growth, national policy, market size, culture & related issues, and it could also reflect the short-falls of the target nation. The organization strengths include the technical, management, financial and resources strength of the company which relates to the company's core capacity. The international market environment is related to the macro-market environment including, but not limited to, international economic environment, international/regional stability, environmental issues, international trade balance and others. These factors are inter-related with each other and will have certain impact to the company's strategic planning and decision to expand their business to the overseas market.

The interaction of the four primary factors i.e. the organizational strength, local advantages (knowledge) of the target nation, home market environment and international market environment is very important. This is because the construction contracting business is a human-resource based industry. The four elements interact with each other and each element may induce a major impact factor to the selection of entry mode. A change of situation in any of the four primary factors may affect the strategic planning of international business development. During the selection of entry mode by the company, neglecting any of the four factors may cause serious distortion to the integrated consideration of the entry mode strategic planning and may eventually cause failure to achieve company's goals in its international business development.

Based on the above, what will be the contents of the four primary factors?

Fig. 5.5 provides a more detailed illustration on the major factors that will influence the interaction of the four primary factors that

affect entry mode. Some of the elements are easily recognizable in the preliminary selection of the target nation. Others will be subject to further studies and analysis. Unlike the preliminary entry selection as mentioned in Section 5.3.1, the selection of entry mode must be undertaken in a detailed and thorough study to all the related elements and then an integrated analysis to all the elements related to the four primary factors. This will then give a much clearer picture to top management during their deliberations on selecting entry modes for their international business development.

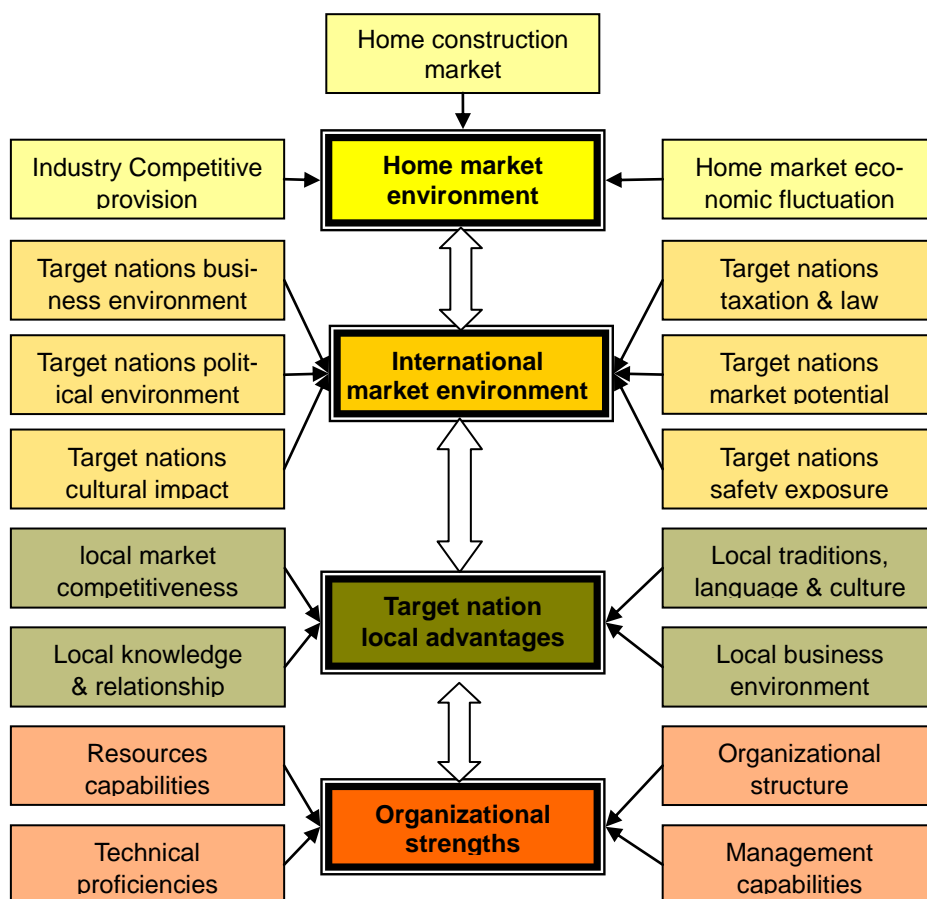


Fig. 5.5: Key interaction factors that affects entry mode

In Fig. 5.5, the factors from home market environment factors that will be recognized by the contractors. The factors of the international market environment and particularly from the target nations are also external factors that are not usually recognized or known by the contractors. These external factors are mostly factors that

are generated by the business environment and are out of the control of the contractor. Hence the contractor is only able to react or respond to these external factors.

Such responses or reactions are tests of the strength of the organization. For the target nation's local advantages, the factors may be alien to the contractor in the start. The contractor may be forced to adopt local expertise either through an alliance with a local contractor or through recruitment of local staff to overcome the shortfall of local knowledge or connections. But with the passing of time, the contractor may gain better knowledge or connections in the target nations and understand better the local operating customs or practices. Then the strength of the company will be developed to a state that it can perform in the local market by itself. In any event, the core concern is the strength of the company. This related to the company's financial capacity, human resources quality and quantity, technical capacity, management ability in various levels, and associated supporting systems.

5.4 Contractor Capacity in International Market

When reviewing the foreign market entry mode, the writer believes that the conceptual model of contingencies suggested by Minor et al., (1991) as shown in Section 5.3.2 must be enhanced. It is argued that the company's strength, i.e. the capacity of the company, is the core to all business activities. This core strength is sensitive to the business environment of the home market and is also important to the selection of target market. The strategic planning, decision making process and execution of production or supporting services are all within the direct control and administration of the organization.

Here, it has to be clarified that the core capacity of the organization is not the value chain of the organization. The core capacity of the organization is characterized by its human resources, organization culture, financial capacity, management capacity, management systems includ-

ing, and includes, but is not limited to, quality assurance system, Safety management system & Risk management system and also other supporting systems such as the Information Technology and Communications (ITC) systems.

In the home market, where the organization has sufficient knowledge of the business environment, the construction organization is usually capable of operating by itself. Only when it needs external assistance to strengthen its technical ability or diversify its risks or financial capacity, will the construction organization consider working in alliance with other contractors to bid and execute a project. But, when it is penetrating a new business environment where local knowledge is insufficient for the organization to ensure its performance, the company may choose to work in alliance with local contractors who have sufficient local knowledge and connections to guarantee the alliance is able to perform. However, the company has to accommodate and supplement to the shortfall of the local contractor. No matter which way we are looking at the market, survival or development, the self-exploration of the company's core capacity is of utmost importance. An under-estimate or over-estimate of the core capacity of the company will represent severe cost implication to the company for its survival and development. An organization based on its own strength handles and faces factors from the home market environment and requires local knowledge and connection assistance in handling the international market environment as shown in Fig. 5.6.

Fig 5.6 also shows the synergy of the company together with local company to face local market challenges of the target nation. The shorter time it takes the company to gain local knowledge, the less important for the company to work in alliance with a local company. From another point of view, when a local company gains sufficient strength and experience then its need to work in alliance with a foreign company will diminish. Under this situation, the company will have a reduced competitive edge in the target nation and business development in the target nation may come to an end.

Fig. 5.6, a model developed by the researcher, delivers an important message. In the home market, the company should have its optimum strength because of its resources connections and availability, local experience, local knowledge and local relationships together with its technical, management and competitive knowledge. But once the company enters a new overseas market, part of its strength in the home market may become its weakness. That part of the strength needs to be more related to local resources connection, local experience, local knowledge, and local relationship. Besides these major issues, the company may be also falling short in managing local staff, and staff assigned to work in the target nation may encounter cultural impact and etc.

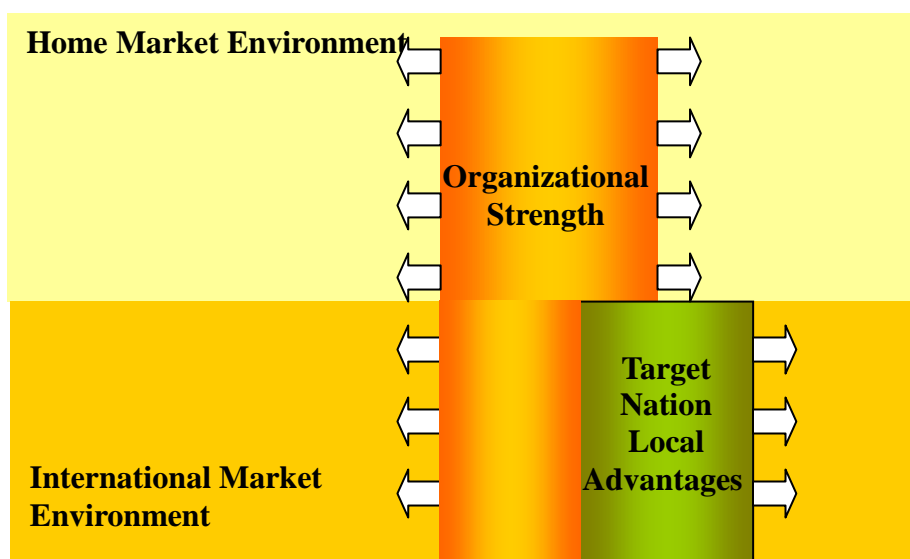


Fig. 5.6 Company capacity in handling external influence and impact

Fig. 5.6 shows that the alliance of a foreign company when they first enter its target nation should best be considered as working with local partner(s). However, this is not the only way. The company may very well be able to work single handedly in the event that its resources and management capacity are capable of addressing the local market challenges.

In conclusion for this section, it is important to have a clear and honest self-assessment of the strength of the company. Then the company may review the foreign market environment and consider whether the

market will be able to sustain the necessary development potential/opportunity to justify entry. The entry strategy must reflect the company's own resources and the advantages in the target country that could be coming from their own strength or local alliance or local staff support. Then the chances of success for the company for its international business development will become optimized.

5.5 Strategic Planning for Market Entry

Strategic planning is a very important business activity.

Based on the strategy theory of Porter (1980), Bradford & Duncan (1999) has suggested a simplified view of strategic planning process that is shown in Fig. 5.7.

Each of these stages is now considered:

The *mission* is the company's business vision defining the value and long term forward goals of the firm. Based on

the mission, the management of the firm will define their financial (measurable through sales target, profit and growths) and strategic *objectives* (good-will, market share & etc.).

The *environmental scanning* includes the firm's internal analysis (strength & weakness in SWOT analysis), and external analysis which can be considered as a combination effort of analysis between macro-environment (PEST analysis) and micro-environmental analysis (opportunities & threads in SWOT analysis). PEST Analysis is the short-form of "**P**olitical, **E**conomic, **S**ocial and **T**echnological" analysis. SWOT analysis includes "**S**trength, **W**eakness, **O**pportunities & **T**hreads". The strength and weakness is the basis of the company's

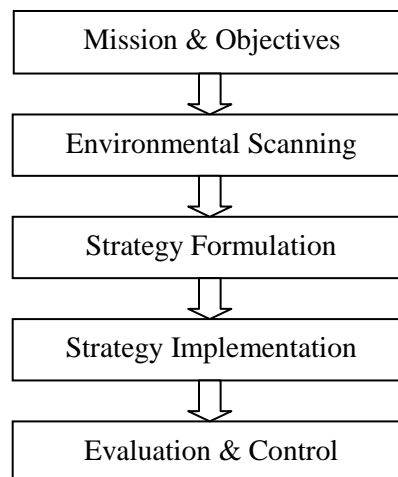


Fig. 5.7: a simplified view of the strategic planning process

resources and capacities that reflect its competitive advantages i.e. its cost effectiveness, good-will of the company, brand name, technical know-how, resources particularly human and financial resources for the construction industry, its connection network and etc. The opportunities and threads are more related to the "Porter's five forces" (1980) that include the analysis of entry barriers, suppliers, customers, substitute products, and industry rivalry.

With respect to *strategy formulation* the author strongly agrees with Porter (1980) where he says, "The essence of formulating competitive strategy is relating a company to its environment". However it should always be noted that external environment always exists *and that it is forever changing*. The global market comprises of numerous individual markets and each has its own environment that allows the firms to survive and develop. However, the external environment including its changes is mostly not controllable by the company. What the company can control is its internal capabilities including its resources, capacities, and strategic planning. These three elements reflect the strength and the success of the company. From another view, the internal capacity of the company including its culture, know-how, management capacity & resources of a firm is built up over a long period of time. These core strengths and weaknesses are not easy to change. Hence it is argued that the prime element of consideration for international market development is the core capacity of the firm. All external environments influence, no matter they be macro-environmental or micro-environmental, are external factors that would be known and learnt by the firm through knowledge acquired over time. The company will be able to make necessary changes through its continuous learning. But, the internal change of the firm is going to take time, during which the company may not be able to accommodate the changes in the market environment. This is particularly the case for new players that enter the international market.

The *strategy implementation* and *evaluation & control* involve the practical implementation and associated activities. These are activities re-

lated to continued market entry actions, tender management as well as future project execution. Only the continued market entry actions and tender management is included as part of the research and is demonstrated in Fig. 5.1 and also discussed further in the following sections (see Section 5.5.4 and 5.5.5). But the future project execution is fallen outside of the scope of this research.

5.5.1 Mission & Objectives

It should be clear that the mission and objectives are the guidance set by the company.

Say, (2005), argued that mission will feed into the confidence of one's organization by feeding this ever-present self-talk: "*We can do this, and we are the ones ordained to do this, for we are the best at it.*" She also argued that vision creates that momentum of growing anticipation about the future, whereas change is embraced as a step closer to that very compelling picture of what's coming next. Usually a vision is formed to identify the future goal and it is usually followed by mission that represents the time-related guide and actions to achieve the vision.

For international construction business development, it is very important for a company to have a clear vision that gives a bright and prospective future to the company and must be assimilated with the organization's core values and culture. Furthermore the vision must also be practical and executable. It should be clearly and constantly communicated to ensure the whole company shares the same vision and build up a spirit to encourage every member to adjust their own vision to become compatible with the organization's vision. Thus the company has to formulate a mission that all internal members are in unity and committed to focus on the achievement of the vision. The company also has to convince the external members (e.g. shareholders) to concur with the mission and create greater value to the company.

5.5.2 Environmental Scanning

Environmental scanning needs to include the firm's internal analysis (strength & weakness in SWOT analysis) and an external analysis. This external analysis can be considered as a combination effort of analysis between macro-environment (PEST analysis) and micro-environmental analysis (opportunities & threats in SWOT analysis) (Porter (1980) and Bradford & Duncan (1999)).

There are many texts that discuss the environmental scanning process. The general concept of the environmental scanning process is described in Section 5.5. The process (Bradford & Duncan, 1999) is demonstrated in the Fig. 5.8.

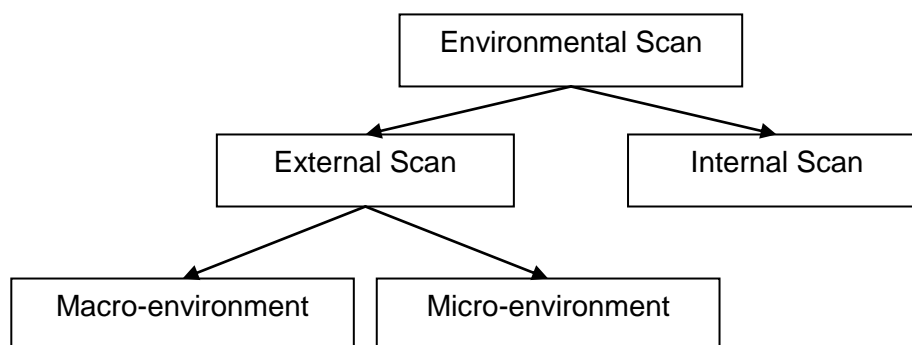


Fig. 5.8 Environmental Scanning Process (Bradford & Duncan, 1999)

The scanning of the internal and external environment is a very important activity for strategy development. The core of scanning is to internally analyze the organization and also review the organization's environment at the time of the scanning and consider how the firm should develop in the future. The analysis of the organization is to identify and understand the strengths and weaknesses of the organization that it is facing within the organization and also the influence of the market upon the organization. The core competence of the organization should be well studied, analyzed, reviewed and known including but not limited to its management capacity, technical know-how, financial capacity, human resources quality and back-up resources, supply chain,

organizational culture, organizational structure, operating market environment, competition threads, operating region's social influence and etc. The list can be extended in an endless way to cover all issues affecting the company's value chain.

The best description of such internal scanning is in the words of Sun Tzu (1993): "If you know both yourself and your enemy, you can come out of hundreds of battles without danger (*in Chinese: 知己知彼，百戰百勝*)." It is clear that people already understood the importance of 'to know yourself' even in 6th century BC. In the modern world, many organizations are learning-based organizations and they are changing constantly based on their learning capacity. Hence the internal scanning should be subject to periodic study and review in order to ensure that the latest developments or changes within the organization suitably address the external environment impact.

The external scanning of the environment is important. In SWOT analyses strength and weakness is identified and reviewed in the internal scanning process. But opportunity and threads shall be examined in the external analysis i.e. in the micro-environmental analysis. Besides micro-environment scanning, the company also needs to carry out macro-environment scanning. This will include the framework of Porter's five forces (Porter, 1980) including entry barriers, suppliers, customers, products, and industry rivalry. Later Bradford suggests seven factors to be more appropriately considered in the external environment analysis:-

1. Markets (customers)
2. Competition
3. Technology
4. Supplier markets
5. Labor markets
6. The economy
7. The regulatory environment

5.5.2.1 Preliminary external environment factors

Based on this research, the external environment can be further divided into two stages; a preliminary environmental scanning should be carried out prior to an in-depth scanning of the external environment. This preliminary external environmental scan should provide a guide to the organization to short list the considerable number of choices of international markets. The scan should be based on the core strengths of the organization for the purpose of narrowing down the volume of information as well as the time frame of the external environment scanning.

A model of preliminary external environment factors affecting organizations expanding their business to international markets for the first time can be shown in Fig. 5.9.

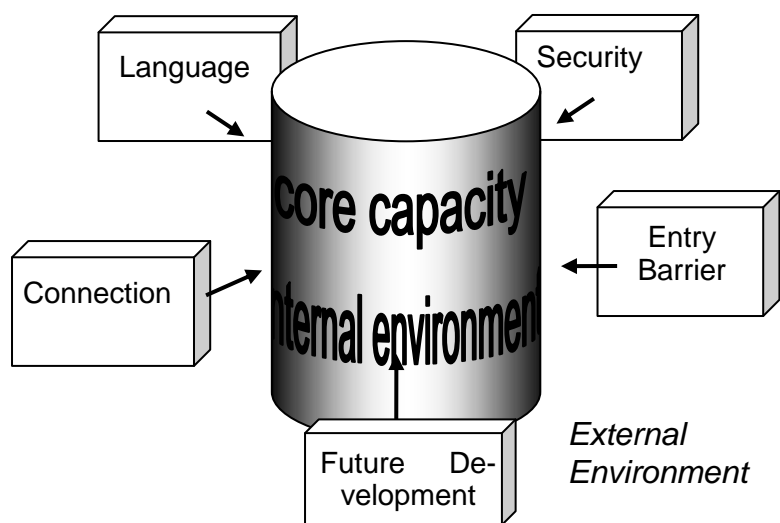


Fig. 5.9 Model of preliminary external environment factors affecting companies expanding their business to international markets

Fig. 5.9 shows that the core capacity, or internal environment, of the company is affected by all types of external market elements. These elements include all the external dimensions mentioned in Section 2.3.2.3. Amongst all these dimensions several key factors including security, language,

connection (guanxi and local contacts), future development (market potential) and entry barrier are shown to indicate that they may appear simultaneously or separately during the preliminary consideration stage of the overseas business development.

These elements have been identified from the case study example but should be adjusted based on the characteristics of each company. The external selected criteria must match with the core capacity so as to formulate a guide to further in-depth study to the target market(s). The influence or impact of the preliminary selected criteria of the external environment to the core capacity of the organization will be an important guidance to the further studies of the organization to their international business development model.

5.5.2.2 Study of external environment

As discussed in 5.5 and 5.5.2 the framework of the Porter's five forces (Porter, 1980) for external scanning of the environment include entry barriers, suppliers, customers, products, and industry rivalry. Later Bradford suggested that seven factors should be more appropriately considered in the external environment analysis including markets (customers), competition, technology, supplier markets, labour markets, economy and regulatory environment. Each of these seven factors may have different weights for the companies. Bradford (2010) in his article "External Situation – What to Consider" believes that organizations seldom examine all seven factors with markets and competition almost always regarded as key factors when considering a strategy. Technology is also a factor that companies commonly believe to be important.

When reviewing the macro-environment, PEST is used by an organization to analyze the framework of the ma-

cro-environmental factors (Armstrong, 2006). PEST stands for political, economic, social and technological factors of the target nation. The political factors usually refer to the government policies, regulations and other legal issues that an organization when operating in such an environment has to abide by. The political factors include, but not limited to, tax policy, racial policy, religious policy, employment law, environmental law, political stability, trade protection, and etc. The economic factors usually refer to cost of the organization and the market power of the environment. The economic factors include, but not limited to, market size, market growth, economic growth, foreign exchange control, interest rate, inflation rate, tax rate, and etc. The social factors usually refer to cultural and demographic factors of the environment. The social factors include, but not limit to, population growth, hygiene conditions, security concerns, tradition, attitude of people, religious preference, gender discrimination, and etc. The technological factors usually refer to technical advantages of an organization that can reduce entry barrier and protectionism factors. The technological factors include, but not limited to, advanced technological know-how, IT system, advanced equipment, R&D ability, management capacity, and etc.

In fact, management skill is becoming more and more important. In the construction industry, the technological difference is not as large as other industries and modern technological changes are not often. There is much more emphasis on the skill and capacity of management. The technical specialty that any construction firm may have in a foreign environment may gain a couple of years advantage. Then the local contractors will be able to learn and catch up in a short period of time. However management capacity is not that easy to learn and usually when human factors are involved particularly the attitude of the people is not easy to change in a short period of

time. The author strongly suggests that the macro-environmental scanning should include the management which is one of the contemporary external environment critical factors in entering foreign markets. Management factors include, but are not limited to, construction management, contract management, financial management, commercial management, schedule management, cost management, and etc. In the view of the author, PEST (in another term: STEP) should be expanded to SMEPT i.e. include management in the framework to describe the macro-environment factors used in the environmental scanning element of the strategic management.

In the follow-up study conducted by the researcher in 2008, the more important issues of Hong Kong contractors who have no or very limited experience in international business development are political stability, potential of the market, “guanxi” for easy entry, good margin, security and knowledge of the nation. It is also observed that the Hong Kong contractors have changed slightly in the appreciation between 2004 and 2008. The main difference is shown in Table 5.1.

Table 5.1 Main concerns of HK contractors in development of overseas business

2004	2008
Political stability	Political stability
<i>Market size</i>	Market potential
Market potential	Guanxi for entry
Guanxi for entry	<i>Good margin</i>
Knowing the nation	<i>Security</i>
<i>Attractive policy</i>	Knowing the nation

The change in the concerns over the time period studied is probably because in 2004 HK contractors still had a good expectation of the China market which is large in size and provided attractive policies to HK contractors. After four years, the China market remains a large construction market but the entry barriers are becoming more obvious to HK contractors. The so called "attractive policies" of China are eventually acknowledged to be not so attractive as they first appeared. The importance of margin and security came into the picture and mainly because there were several severe terrorist attacks and even Chinese engineers were killed drawing serious concern of Hong Kong professionals. Further importance of margin is showing a major hike from 2004 to 2008. It is believed that the threads to the survival of the organizations are becoming less important and the margin generated for the company is becoming recognized as the prime factor. This is becoming more apparent particularly when the Macau construction market boom developed almost overnight in 2007 and Hong Kong contractors are taking advantages of the Macau boom and balancing their survival headaches in Hong Kong. It should also be noted that Hong Kong contractors are also very concerned about the legal system and taxation complexity of the target nation. Safety concerns have increased mainly because of the incidents reported in Pakistan and Afghanistan where some Chinese engineers were killed. Emphasis in security is a general concern of nearly all Hong Kong contractors.

In comparing the prime concerns on micro-environment of HK contractors with the suggestion of Porter and Bradford, it is noted that Guanxi (relationship) is a very important factor considered by the contractors. In fact this is also a very common concern of a lot of Chinese companies. Margin, in the perception of the author, is quite similar to competition. Reduced

competition will yield higher margin even though it is generally recognized that management is a main contributing factor. The market potential is another major factor because it implies that the target nation will be able to provide opportunities for long term commitment by the organization. It seems that HK contractors also do not intend to operate in a 'hit and run' situation. Security is something that neither Porter nor Bradford has touched upon. In fact, HK contractors consider security as a very important issue in the external environmental scanning. Suppliers are important but in construction business no matter local or foreign contractors will have to seek for similar supplies including cement, aggregate, steel and etc. It is obvious that regulatory environment is common to Bradford and HK contractors.

In the eyes of HK contractors suppliers may have some difference in their treatment to local and foreign contractors but the difference is usually tolerable in the competition. But the local knowledge is much more important for the HK contractors. Local knowledge relates to cultural differences, differences in tradition, local practices, and local connections. HK contractors believe that working relationships with locals in particular working with local partner is very important.

The importance of local contractors is their possession of local knowledge which is the most critical pitfall of Hong Kong contractors when they enter a foreign nation and commence their business. A comparison of prime factors affecting micro-environmental scanning between Porter, Bradford & the author is shown in Table 5.2.

Table 5.2 Prime factors affecting micro-environmental scanning

Porter's 5 Forces	Bradford 7 factors	Author's 7 factors
Entry barriers	Markets (customers)	Guanxi (relationship)
Suppliers	Competition	Competition (margin)
Customers	Technology	Market potential (Economy)
Products	Supplier markets	Security
Industry competition	Labor markets	Local knowledge
	Economy	Regulatory environment
	Regulatory environment	Management

The researcher argues that the environmental scanning is vital for any organization intending to develop their construction business to international market especially when such expansion is a new experience for the company. The scanning should link closely between the core competence of the firm together with its external macro and micro environmental scanning. In another words, the core competence of the firm should remain the core consideration of all external considerations.

It should also be noted that time is of essence for the scanning and analysis because only over time will the firm be able to have a wider and deeper understanding of the foreign external environment. Only having such wider and deeper understanding of the foreign external environment and then reviewing and analyzing with reference to the core competence of the company, will the company be better able to formulate and implement an effective international business development strategy.

5.5.3 Strategy Formulation

After the environmental scanning, (including the preliminary external environmental scanning and the micro & macro environmental scanning), and after reviewing the core competence and capacity of the organization, a better understanding of the organization and the opportunities is gleaned. It has to be emphasized that the understanding and knowledge of the target nations are not fully known and appreciated by the organization. But its knowledge and understanding should be considered as sufficient for the organization to start its strategy formulation.

It should be noted that there may be more than one target nation of the organization. The characteristics of each target nation may be different from those of other nations. Hence the formulation of strategy should be tailor made for each target nation based on the characteristics of the nation and their matching these to the competence and capacity of the organization. The core capacity of the firm should be carefully compared with the characteristics of the nation revealed by the firm through its preliminary scanning, external micro and macro-environmental scanning. A strategy should be formulated to suit the balance of the two key elements. The relationship between core capacity, environmental scanning and strategy formulation is shown in Fig. 5.10. The preliminary scanning is marked with different colour because the more detailed discussion is shown in Section 5.5.2.1 and Fig 5.9.

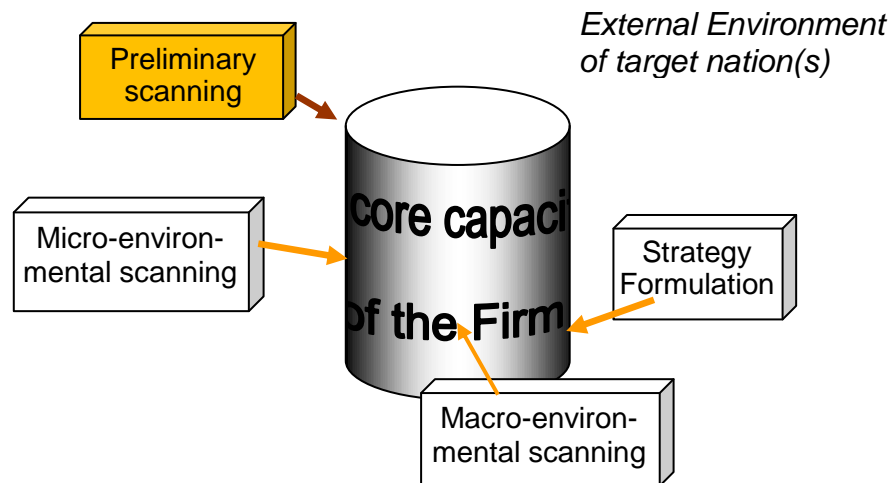


Fig. 5.10 : Model of Analyzing environment and core capacity of organization and formulate strategy

Fig. 5.10 shows the relationship of the core capacity and the surrounding external elements. These elements may be the same elements already considered or additional elements that have not been considered in the preliminary consideration stage as shown in Fig. 5.9. The difference is that in this strategic formulation stage, the elements being reviewed has to be more thoroughly investigated or checked. This will provide a wider and deeper understanding of the elements being considered. These wider and deeper knowledge-gains should blend with the internal core capacity of the company. Then the strategy formulation can be established by the company based on the unique chemistry derived from the analysis and conclusions of the blending of the internal and external environment.

Another major concern of Hong Kong contractors in their overseas business development is "guanxi", i.e. relationship. The researcher has arrived at the conclusion that whilst guanxi is important, it is not a critical factor in the environmental scanning, objective scanning and analysis of the foreign nation environment compared with the core competence of the firm and establishing the best model for entering the foreign market are much more im-

portant factors.

“Guanxi” is the long-term build-up of a relationship or network and is an effective tool to ensure better opportunity in the event of an award of a project. However “guanxi” cannot ensure smooth and successful completion of a project. The execution and completion of a project depends on the core capacity of a company and continuous effort to build up a working relationship at the working level to ensure trust between the parties is built up. Only when such long-term and in-depth relationships in place can the working relationship with the alliance become a reliable and effective one. The entry strategic formulation also appears to be very important when selecting the segment of entry. This also binds the core capacity of the firm with the environmental scanning of the target nation together. The services or product that the target nation needed most should match with what the firm is capable of and is competent to provide. A perfect match of the demand and supply will also mark the successful factor of the overseas business development model of the company.

The formulation of strategy of a firm to its target nation should match its core capacity with the environment of the target nation. The match includes many issues that include, but are not limited to, language barrier, segment of entry, guanxi, technical know-how, management capacity, experience, financing capacity and is a never ending list. However, it should be noted that certain prime factors in the core capacity of the firm must match with the external environmental needs of the target nation. The right match will mark the possible success of the firm in its business development in the target nation. Hence a true and honest self assessment of the firm should be conducted and integrated with the assessment with the environment scanning to ensure that the strategic entry model is correctly selected. This is the most fundamental and essential element of the strategic formulation.

5.5.4 Strategy Implementation

After the strategic planning and selection of a strategic entry model for overseas construction business development, the next important task of the firm is to ensure the implementation of the strategic entry model. This will be the first test of the firm on its overseas business development. Strategy implementation is largely dependent on the capacity and attitude of the persons who are going to execute the implementation as well as the team work of the firm. They need to be able to adjust their operation systems to suit the new environment.

The implementation process is usually materialized through the selection of a project and its subsequent pre-qualification and tender process. This is particularly important for any firm that is entering the foreign construction market for the first time. The staff assigned to participate in the foreign market entry may be totally new to the market. These staffs have to face their own personal problems besides the problems that will be faced by the company. Yet the strategic implementation of the company is dependent totally on the performance of these staff. It is more desirable to send staff to the overseas target market with international working experience so that his/her experience will enable personal problems to be overcome and the staff member to focus more on the overseas business development. It is important to note that each country has its own unique characteristics. This is the importance for the company to take note on the culture of the target nation. Persons working overseas may not be acquainted with the local culture of the target nation but the principles in handling people and issues of a foreign country may be quite similar. The pilot team sent to the target country must be a group of staff with technical competence and a flexible mentality. They must be sharp in their appreciation of all the new matters so that local traditions or customs are respected and followed. They will have to work together with the local staff at the working level and also with

local authorities with whom they have to consult.

There are many of these kinds of experience that people working in a foreign country will come across that are totally different from the city where they are coming from. These are practically cultural impact. One should not use these cultural differences as a reason for discrimination. This will create a detrimental, conflict attitude with the local people. Hence tolerance and patience is the best way to deal with problems. But with people that have no experience in handling these kinds of cultural impacts, how can a firm handle such situation? The key is leadership.

It is very important that when a firm is sending staff to a foreign country for the first time to develop business, it should have a good and strong leader. The quality of the leader will determine whether the strategy implementation is successful or not. Leadership has been widely discussed in various treatises (Spencer, 1884; Burns, 1978; Hackman & Walton, 1986; Locke, 1991; Kaiser, Hogan, & Craig, 2008) and the researcher does not intend to repeat all the theories and critiques of leadership.

It is very important that leadership and emotional intelligence (in the modern measurement term ~ EQ: Emotional Intelligence Quotient) should be considered as an entwined process to the social influence of the staff of the firm as well to the staff of the partners and any other associated member related to the business development process. The leader's ability, capacity and skill to manage the emotions of him and/or others and/or group will have a major impact on the result of the implementation of the strategy.

Apart from leadership, there is one more critical issue that is collaboration culture. The theories of collaboration culture have been discussed in detail in Section 2.4. What needs to be discussed here is how the collaborative culture could be built up in a short period of time.

5.5.5 Strategic Control

Strategic planning is a very difficult to implement and control. This type of control involves a decision making process but differs from management control. Control has been defined as the process by which an organization requires its operating units or subordinates to act/ behave in the ways that lead to the achievement of the organizational goal (Arrow, 1974). The general definition of management control is: "Management control is the set of measurements, analysis, and action decisions required for the timely management of the continuing operation of a process". However, strategic control is more oriented to the future and is more concerned with the evaluation of the decision process that is related more to external factors (Ghicaianu, 2008). For good strategic control it is necessary:

- to determine the strategic control points;
- to determine the values of these control points;
- to evaluate the feedbacks with the control points;
- to consider changes, if necessary; and
- to make decisions in changing strategy or control of the situation.

The problems of strategic control are always time related. Usually management can apply control *prior* to any activity commencing (preventive), *during* the process of the activity (progressive) and *after* the activities have been completed (evaluation). No matter which type of control is applicable to the strategic planning, the width and depth of knowledge from the external environment is always increasing in relationship with time. For overseas business development, particularly for a firm proceeding with development for the first time, strategy can only be verified through the gaining of knowledge over time. Preventive control points can be set up through risk management and also certain key controlling

factors. The same applies to progressive control and completion evaluation. In fact for overseas development, there is no completion unless the development has come to a complete stop.

It is argued strongly that preventive control and progressive control should be executed regularly, based on the increase in time and the accumulation of knowledge in both width and depth. In another words, overseas business development strategy should be evaluated and modified from time to time based on the knowledge accumulated through the operating team in the target nation for the entire external environment including both micro and macro-environment.

Adjustments in strategic planning usually depend on the findings based on strategic control. These findings may induce minor or sometimes major changes in strategic planning. However, it is clear that the following must be executed with best efforts of all the company's team members:-

- (i) the gathering and understanding of more information from external sources;
- (ii) the investigation and understanding of issues originating from internal sources;
- (iii) the interpolation of the knowledge gained for the future;
- (iv) the evaluation of the impact on strategic planning based on knowledge gained;
- (v) the adjustment of strategic planning and its control points based on the above; and
- (vi) the carrying out of strategic control in an optimized time period based on characteristics of the controlling points e.g. development progress, tender progress and etc.

Strategic control is probably the most important tool in strategic planning. It gives an opportunity to the firm to carry out regular and systematic reviews, analyses and evaluations of the strategies set for overseas business development. Such control is absolutely necessary because the width and depth of knowledge of the external environment and also the capacity of the firm need be reviewed and evaluated regularly to see whether there is any decision shortfall. It should also be appreciated that the knowledge of external environment cannot be obtained in a short period of time as width and depth of external knowledge can only be gained over a protracted period of time. The internal capacity should also be reviewed regularly to ensure it is not over-estimated or under-estimated causing negative impact to the integration of both internal and external environment.

5.6 Tender Management

Tendering is a key strategic control tool for the strategic planning (Akin-toye, 2000; Carr, 1989; Smith, 1995) and it is also an important test for the company in its preparation of overseas construction business development. The preparation of tenders during overseas construction business development is also considered a critical factor in marking the company's success in entering a new market (O'Brien, 1994; Akintoye & Skitmore, 1991). Enhanced tendering procedures will allow the company to gain further knowledge in both width and depth of the target nation providing a good basis for sustainable development in the target country.

There have been several "national aid" projects from China, USA, Japan and etc. in the past twenty years and such government assistance is continuing to exist even though much of the funding is being diverted to other internal sector-specific development programs. A trend that can be observed is that the assistance is usually linked to the issues of security, regional stability or natural resources. This type of national aid projects assist the construction business development of a company to

expand to overseas. However, the result of these kinds of national aid projects induces the construction companies to participate and compete in a more competitive environment. For those companies that do not have such knowledge of the foreign countries, it is important for them to gain sufficient knowledge to carry out tendering exercise in their overseas business development progress. Hence the effectiveness and efficiency of tendering are the crucial factors of the tendering process. In fact, tendering performance by itself is a critical factor but it is not the only factor and the absence of other supporting factors may prove the entire exercise to be insufficient. The key factors for successful overseas tendering include, but are not limited to:

- a. to prepare a winning submission – including the tender strategy, tender team, effective response to tender requirements in both technical submissions, schedule and quality/safety/environmental plan;
- b. to deploy efficient tender management skill including risk management, tender management, inter-culture management and ITC management;
- c. to ensure advance positioning of financial & human resources, project manager, local knowledge and supply chain links;
- d. to take full advantage of past experience, equipment employed and value-added items; and
- e. to tender the right commercial offer, being both competitive and giving value for money.

It should be noted that tendering is “the” last advance activity of a company prior to project execution in its overseas construction business development process. Business development including selecting target nation(s), entry mode, strategic planning, strategic implementation and etc is a process securing opportunity for the company. Tendering is a practical process whereby opportunity is converted into reality whilst striving for profitability. Execution of the project after award is the

process whereby the firm realizes its potential and profitability through its management, but this is not in the scope of discussion of this thesis. It should be noted that the business development phase and

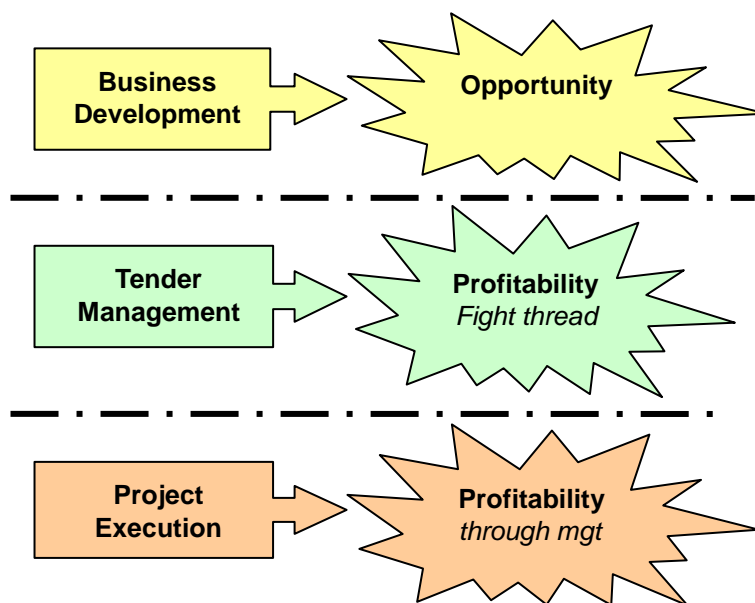


Fig. 5.11 - Aims of Overseas Construction Business Development

tendering phase are not clearly separated. Due to the gain in both width and depth of local knowledge, the author suggests tendering may have to be carried out many times to facilitate further and better gathering of local knowledge (see Fig. 5.11).

Fig. 5.11 demonstrates the changing objectives of different stages of overseas business development. Hence in the first two stages, business development stage and tender management stage, the objectives of opportunity and profitability are set based on risk assessment and company targets. These objectives must be set with firm and solid assessment bases so that the company will not be exposed to un-considered uncertainties or risks. In other words, the first two stages of Fig. 5.11 represent prevention and the last stage (project execution) represents diagnosis with treatment. The author highly recommends prevention is better than diagnosis that can only be corrected by treatment.

As mentioned in Section 5.6a, it is an industrial tradition to prepare tender conventionally, but the winning submission depends largely on the tender strategy, quality of the tender team, and tender preparation. Previous researchers have identified the importance of tender strategy

(Li, 2000; Li, 2004), tender team (Regan, 2006; Scarbrough *et.al.* 2004) and traditional tender preparations commonly known by professionals working in the construction industry. However, contemporary tender requirements have added quality, safety and environmental protection as important elements to the tender submissions. Yao (2004) emphasized the importance of integration of cost, schedule, quality, safety and environment management.

The importance of effective tender management is crucial to a successful tendering process leading to a good tendering result. Tender management usually includes traditional practices to prepare tender technical submittals and schedules together with the manual calculation of the tender price. However the modern needs of the company and improved technology have changed traditional tendering procedures to render them more reliable and effective. These additional needs include detailed identification, review, analysis, evaluation and/or mitigation of risks associated with the project. This is because the stakeholders of the project are becoming more international and cover a full value chain of the company. Further, the need of efficient, effective Information Technology & Communication systems is becoming crucial because fast information exchange between the supply chain and the tender team, as well as within the organization is becoming extremely important.

For overseas tendering, inter-cultural management is also becoming very important, as local knowledge and tradition has to be respected and amassed in every way possible. In particular, when the company is working in the overseas market for the first time with an inexperienced tender team, having to depend on local people to provide local knowledge, a collaborative working environment between the local and expatriate team is of crucial importance. It must be fully understood by the tender team and also by the company that construction must always be considered as a local business as the end products are always built locally albeit in a regional context. When a company is committed to overseas construction business development, this means the company

has committed to earning revenue in the targeted market. Local people in the local market together with their knowledge in social, economic, cultural, geographical and any construction related practices are becoming an integral part of the local-overseas construction market prime elements. Hence inter-cultural management is a very important tool in the overseas construction business development. Fig. 5.12 illustrates the team work model of the overseas project management (tender) as suggested by the researcher. Overseas construction business development must be structured in such a way that the projects in the targeted nation(s) are executed in a professional way whilst blending with the local environment, traditions and practices.

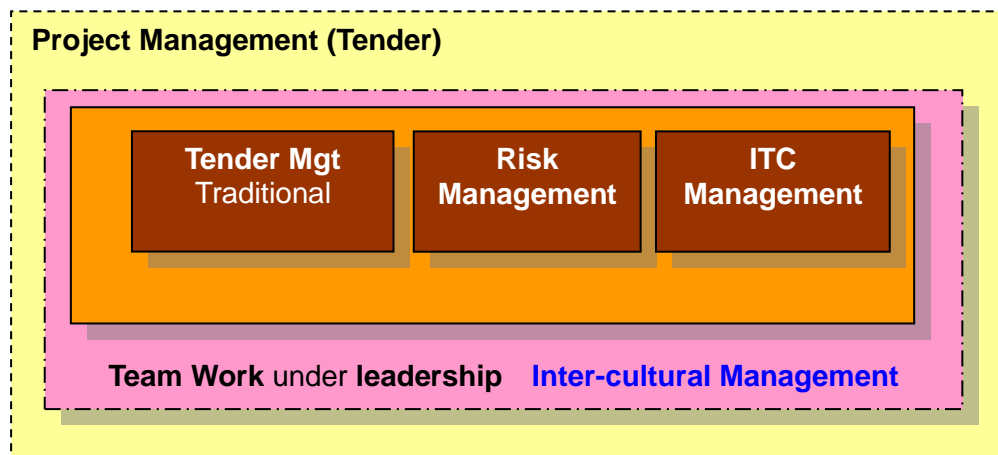


Fig. 5.12 – Project Management (Tender) Team Work Model

The management system presented in Fig. 5.12 represents only the prime management system for the project management of the tendering process. Each of the management sections shown should be led by a dedicated leader. Success is dependent upon the effective and efficient coordination and integration of all relevant systems. As local resources are the key stakeholders relating all aspects, the inter-cultural management in every area is important. The full integration and collaboration built within the project team is subject to the leadership of the project leader together with every unit head. Hence the leader of the project team is crucial to the successful of the overseas business development. The nominated leader has to have leadership plus management skills to lead the team but be flexible enough to take note of

knowledge gained from the external macro and micro environment as well as the capacity of the internal environment.

The business development executive group is a group of valuable individuals who should have strong belief in the overseas development strategy and are capable to gain knowledge, provide support, leadership, execute tender(s) and management and later able to implement execution of the works in the event that the project is awarded to the company.

As mentioned before, tender management is an important stage in overseas business development as it serves as an important test process to all the previous findings and the strategic planning of the overseas construction business development. In fact, it should be expected that further findings will be made in the execution stage. The width and depth of local knowledge and the company's own capacity will be further tested and verified during the execution stage; and hence the strategy may be adjusted to suit such further acquisition of knowledge. Hence the overseas business development should be considered as a continuous learning exercise for the organization for its survival and continuous development. A company will need courage and decisive action to ensure the overseas business development is sustainable. In fact, tender management during overseas construction business development can be considered as a 'reality check' not only for the tender effectiveness and efficiency but also for knowledge acquisition and strategic planning.

5.7 Risk management

No matter whether it is for business survival or business growth, one of the prime factors for decision makers to always bear in mind is risk. The construction industry is subject to more risk and uncertainty than many other industries. However, risk and opportunity always go hand in hand (Flanagan & Norman, 1993). The understanding of risk has changed and developed over time. It is radically different from what it was in the past. We can expect it to keep changing (Olsson, 2002).

There are numerous texts that are available dealing with risk and the methodologies in identification and management thereof. Risk management for entry into a foreign nation has been extensively reviewed in Section 2.4. However, there is a gap between the theory and practice in construction risk management. This thesis has reviewed tender and risk management practices in Hong Kong. The overarching area of interest here is *international construction management* and specifically in *pre-contract risk management*.

It is important to identify risk followed by analysis and assessment of the risk items. Then it is necessary to identify mitigation measures for the risks identified and establish a plan to implement these measures. Certain risks can be quantified and others cannot. Hence the usual mitigation measures or approaches are based on (a) risk avoidance, (b) risk reduction, (c) risk retention and (d) risk transfer. Eventually implementation needs to be reviewed and evaluated to identify whether any possible improvement or adjustments required. This thesis argues that such kinds of risk management can be explained through the risk management cycle shown in Fig. 5.13.

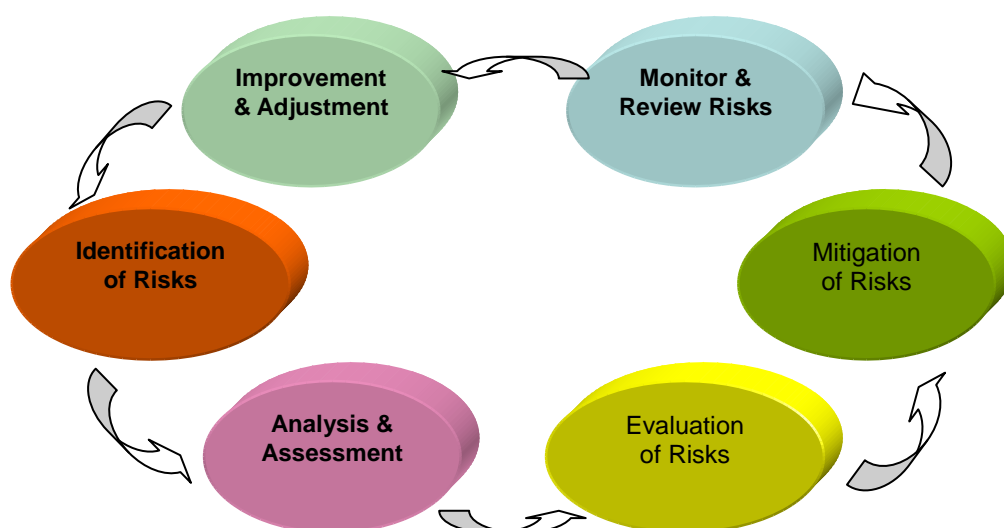


Figure 5.13: Risk Management Cycle

For overseas construction business development, the risks involved may be numerous. Hence the need to separate the development process into phases, including preliminary entry selection, entry mode

selection and tender management, as a means of handling risk. After the contract award to the contractor it is also necessary to exercise risk management. Hence risk management is a continuous process throughout all project execution and management of the company.

In this thesis, the discussion of risk management will focus only the risk management from the commencement of overseas business development up to and including tendering in the target nation. It should be noted that there are few industries that are exposed to higher risks and face more complicated uncertainties than the construction industry. Hence risk management requires various teams of people with different disciplines and interests working together with sophisticated integration among various roles, interrelated yet sometimes conflicting, in operations. The work of all these disciplines will be further blended with numerous internal and external controllable and uncontrollable elements.

It is always surprising to observe the flexibility, identification, responsiveness, sensitivity, control of the management towards risks whilst at the same time the contractor usually try to streamline risk management into risk management procedures in order to cope with their decision-making process in particular during the overseas business development whilst the management is learning and gaining knowledge in the target nation.

The company should understand the risks that they will be facing in the target nation when they intend to develop their business for the first time. Based on the width and depth of their understanding of the target nation environment together with the assessment of its own capacity and capabilities, the company can develop its overseas business development strategy. The strategy shall then be implemented in order to achieve the company's goals. During the implementation, the company will further gain knowledge and improve their understanding of the target nation both in width and depth. Better knowledge, gained, together with internal organization the development team will enable the com-

pany to have a better chance of success. Flanagan & Norman (1993) have pointed out that the elements of the internal environmental and external environment that will affect decision-making are defined in three parts i.e. certainty, risk and uncertainty. Hence risk is not something tangible but should be considered more as a personal perception. Different persons may have different perceptions i.e. risks can be seen by different persons in different ways leading to different actions taken. The perception can be seriously affected by the internal or external environment including, but are not limited to, the following:-

- i. **Global economic environment** ~ this includes the dynamic ever-changing global economic factors such as GDP, exchange rates, interest rates, communications, information flow, multi-national trade environment, crude oil prices and etc. These factors have been of growing importance to the contemporary emerging markets.
- ii. **Domestic economic environment** ~ this includes factors such as GDP growth rate, population growth, interest rates, exchange rates, inflation, taxation levels, investment levels, foreign trade levels and etc. These factors determine the size and growth potential of the economy.
- iii. **Resources** ~ the availability of natural resources, agricultural products, financial resources and human resources are crucial to the development of the economy or the company. The geographical situation also has a significant influence on the development of the country. For example, the development of Dubai depends upon foreign labours whilst India will have excessive labour force in its domestic market.
- iv. **Political Situation** ~ this includes the integrity of the political leaders and their party, the degree of freedom given to the people, the stability of the nation in attracting investment, etc. It is debatable whether political freedom will be more important than economic freedom. A typical example is China where political freedom remains confined but the economic freedom has increased in the last

decade.

- v. **Legal system** ~ a sound legal framework together with sustainable development of that system accompanied by efficient execution of the legal system will be more attractive. For example, immigration law may have serious affects on the development of the nation.
- vi. **Social factors** ~ This includes the social ethics, religion, education level, population size, social stability and factors that influence the acceptance of foreigners, economic development, etc.
- vii. **Cultural factors** ~ this includes the people's values in terms of sense of priorities (personal values) and worth (religious values) (Terpstra & David, 1991), symbols, mentality, social cohesion, language, history, etc.
- viii. **Information Technology System** ~ This includes modern IT and communication system

th reference to the market entry strategic planning where external and internal environment has to critically consider risk items, the main risks that construction industry faces can be further identified when expanding business to overseas. Fig 5.14 developed by the researcher demonstrates some of the major risks affecting the internal and external environment. These internal and external risk descriptions are further explained in Table 5.3.

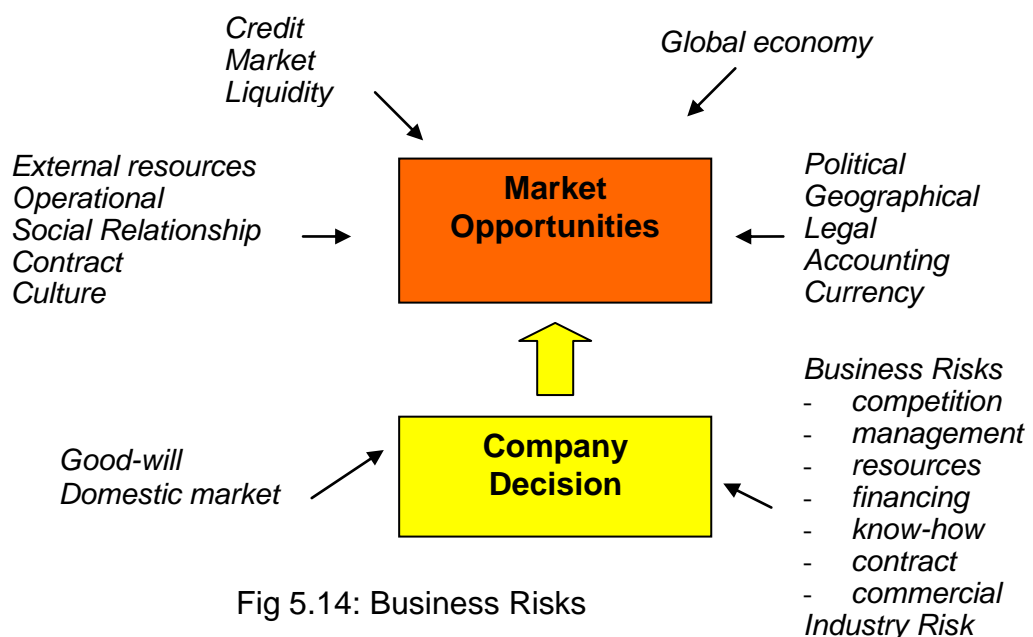


Fig 5.14: Business Risks

Table 5.3 - Risks Description

Business Risk	The risk that would cause failure due to excess competition, lack of ability to manage, inadequate resources, short of financing, insufficient technical know-how, inappropriate strategies, in-depth understanding of the contract, importance of commercial decisions, or response to changes in the competitive environment.
Industry Risk	The risk associated with operation in a specific industry
Good-will	The risk that an organization will take in order to avoid adverse affect to its existing reputation
Domestic Market	The risk that the domestic market changes affecting an organization in its decision to enter/operate in other market(s)
Political risk	The risk that there will be a change in the political framework of the nation
Geographical risk	The risk that relates to geographical, geological, climate changes.
Legal risk	The risk of non-compliance with legal or regulatory requirements
Accounting risk	The risk that financial records cannot reflect in time the accuracy of the financial position of the organization
Currency risk	The risk that foreign currency exchange rates will suffer changes of a nation imposes foreign exchange control
Global economy risk	The risk that any occurrence in any country will produce unexpected consequences in local, regional or global systems and not obviously connected with the source of the disturbance

Credit risk	The risk that a Client cannot pay amounts due to the organization
Market risk	The risk of loss that associated with price movement within a fixed time period including interest rates, equities, commodities, and etc. (Riskinstitute, 2000)
Liquidity risk	The risk that the Client cannot make due payments because of lack of funds
Resources risk	The risk of loss due to changes of resources supply and demand chain
Operational risk	The risk of loss due to employee errors, systems failures, losses to physical assets, fraud or other criminal activity, communication or technology which induces an operational impact
Social relation risk	The risk of loss due to changes in social relations including "Guanxi"
Culture risk	The risk of loss due to different culture in particular related to management and human resources control
Contract risk	The risk of loss due to the unclear or not well-thought or drafted contract conditions

Due to fact that the environment is ever changing, the situations faced will always involve more than one of the above mentioned risks. The prime management responsibility is to understand and manage, but not limited to, these possible risks. In fact, one commonly seen pitfall for management in risk identification is over-simplification of the situation and/or considering that the risk management work is over when, in fact, most of the obvious risks have still to be determined. It has to be remembered that risks are usually interlinked and in many cases they do not appear in a single event.

In the determination of strategy and managing risk, risk should be considered with opportunity. It should be noted that an immediate key

success factor is the consideration of which level of involvement for a particular opportunity is likely to deliver the best result with the minimum of risk – for the organization, the client, the stakeholders and the recipients of support. “Risk in itself is not bad; risk is essential to progress, and failure is often a key part of learning. But we must learn to balance the possible negative consequences of risk against the potential benefits of its associated opportunity” (Van Scoy, 1992). The balance of these two factors can be demonstrated by the figure 5.15.

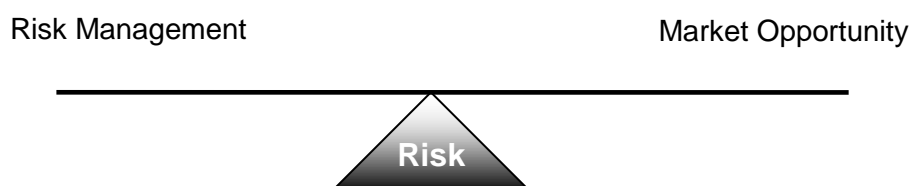


Fig.5.15 – The Risk Balance (Van Scoy, 1992)

The prime components of a review process and feedback loop after setting up short-term plans are to monitor the outcome followed by evaluation and review by the management. Eventually the decision made on the outcome will be fed back to short-term, mid-term and also long-term plans for amendment. The researcher presents a risk management flow chart in Figure 5.16.

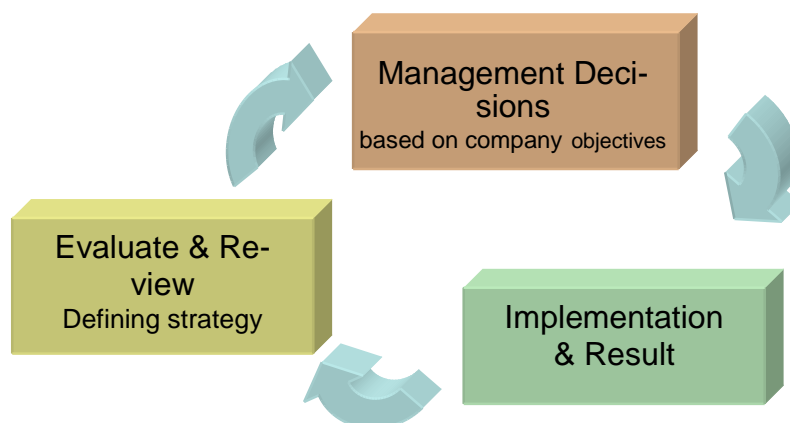


Fig. 5.16 – Risk Management Flow Chart

In the construction industry, risk management is usually carried out in two stages: the tender stage and project execution. However for

companies expanding their business to overseas markets, there is one more additional stage that is the stage whereby the decision is made to enter the overseas market. In fact the three stages of risk management are inter-linked and continuous. As mentioned earlier, the depth and width of understanding of the environment and the relationship with time is the prime concern of each stage. Risks should be fully understood and any risk that cannot be understood should be avoided. Consideration of "People" is the prime element in managing and evaluating risks and not the methodologies measuring risks. In any case, standard or innovative methods in identifying, collecting, evaluating and analyzing risks will be the best tools to help the decision makers select the measures of risk management.

5.8 Dynamic Management – an Integration of entry mode, strategic planning, tendering and risk management

After the review of entry mode, strategic planning, tendering and risk management, it is noted that the prime success factors of overseas construction business development are the following:-

- a capacity to accumulate knowledge;
- b analysis of information obtained;
- c evaluation and review of analyzed information;
- d set-up strategic planning;
- e implementation of strategic planning; and
- f monitoring results.

These actions are cyclic as the knowledge of the company is also being enhanced. Each of the actions has to be considered fully with the capacity of the company. Such consideration should not be restricted only to a certain stage but should be continuous. Such a continuous pattern of management should be considered as another major man-

agement model: a “dynamic management” model. Dynamic management is a management behavior that is able to cope with continuous change of external environment that should be integrated with the capacity of the company together with its knowledge gained through learning. The author believes that the “dynamic management model” of project management in the construction business development stage is very similar to a Formula 1 driver handling the F-1 racing car in a racing circuit. The racing car represents the internal environment i.e. capacity of the firm. The racing circuit, other racing cars and other environmental elements including, but not limited to, weather conditions, service crew etc represent the external micro and macro environment of the overseas target nation.

When driving an F1 racing car, the driver needs to manage the car in a dynamic way. On one hand, he has to fully understand the capacity of his car so that he can manoeuvre and control the racing car at high speed. On the other hand, he has also to take care of the ever-changing race track situation including taking note of weather conditions together with any other approaching racing car to avoiding the occurrence of accidents and the best running condition of his car (integration of external and internal environment). In addition he further needs to work with his racing crew to ensure correct maintenance, re-fuelling and tyre changing (strategic planning). The driver may be required to adjust his strategy or actions in the event that he is falling behind. All these judgments and actions are being carried out at the same time as the racing car is running at a high speed. The same is the case with management of overseas construction business development. There is always a sequence to all the actions but within the actions the comparison of external environment and capacity of the company should never be stopped. In fact the comparison should be carried out from time to time as the knowledge gained through the process is changing very quickly. The adjustment in implementation also may have to be carried out based on knowledge gained.

International business development management is very similar to the

example of driving an F1 racing car. External environment (track situation) and capacity of the company (car) has to be managed every single moment. This is because of the ever changing external and internal environment. The change of the external environment has been discussed in detail before and the internal environment should include its human resources turnover and also its change in strategic planning and decision making based on the change of the external environment. All such changes in strategic management and decision-making processes are part of a very dynamic management pattern. Sometimes, the nominal chain of theories might be broken to start over again because of the sudden change in external environment and hence dynamic management is very important in contemporary management practices.

Dynamic management has been discussed by many people including Leitch (2002), Zhao et al. (2001), Li (2005), de Neufville (2000) and etc. Dynamic management is a frequently used terminology in Mainland China. It applies to management that corresponds to changes in relationship with time. It is a management practice able to adjust interim management patterns whilst trying not to change the ultimate goal and final result. In the event that a change of goal or result cannot be avoided, dynamic management shall still be able to formulate another goal or result or management system based on the changing environment.

This research argues that, overseas construction business development should adopt the dynamic management systems as the ever changing environment will induce decision makers to adjust their goals, results and management system corresponding to time. The risks and uncertainties that associated with any planning for the future performance shall be handled with flexibility so that management will be capable to adjust the plan or action accordingly. However, it should be clarified that the company goal should remain unchanged whilst the short term goal of a project or mission might have to be adjusted to suit the changing environment or new knowledge gained from the application of a dynamic management system. The researcher presents the process

of dynamic management due to change of environment or learning is shown in Fig. 5.17.

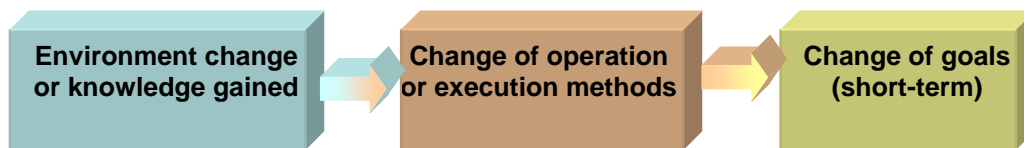


Fig. 5.17 : Dynamic Management due to change of environment or learning

It is in the mind of the author that dynamic management still follows the cyclical process of conventional management theory. But it should be noted that the data collection, evaluation, analysis, review, decision-making and forecast process should be carried out as necessary along the timeline as environment is changing or as knowledge is gained. Such dynamic management processes will allow the project or mission to react or correspond more spontaneously to the changing environment or learned knowledge making management more flexible and able to cope with the latest developments of the environment. In the past much of this kind of management practice depends on the performance of the manager. This thesis argues that such a kind of dynamic management should be more systematic and well understood by the management group and followed by the project or mission team members.

Dynamic management should apply to overseas business development as the environment change together with knowledge gained is vital to the success of the operations. All operations during the overseas business development are critically sensitive to any environmental change or knowledge gained that may induce a major impact to the operation. Hence dynamic management practice along the development timeline is critical to the success of the operation.

5.9 Validity

The credibility of research, in particular research that is not common to research tradition, is assessed based on the researcher's design and methodology to the study (LeCompte & Goetz, 1982). Hence, appro-

priate and justified research design and methodology is fundamental and crucial to the credibility of the research (Cook & Campbell, 1979). This research was designed with methodologies, as demonstrated in Chapter 3, to ensure the case study and the researcher's interest lay in the same particular set of phenomena as well as the same area of interest. Hence it does not confront with Rapoport's (1970) dilemma in both answering research questions and solving practical needs. Furthermore this thesis also complies with the requirement of Checkland & Holwell (1998) in the validity of action research and provides a firm and consistent framework for the research. In this thesis research questions and practical needs are clearly defined and acknowledged, the researcher's interest is fixed in a particular set of phenomena as the researcher and the research study has integrated and interacted throughout the study. The researcher, acting as a completely participant, has diminished his wish to control or select issues (Baskerville & Lee, 1999) and focus only on the targeted questions and practical needs.

Construct Validity

The case study of this thesis is based and justified on a blended research method of complete participation, active participation and traditional case study (refer to Section 3.5). This case study provides insight and in-depth knowledge of particular phenomena in the setting of the real-world. The quality of the proposed structured models expressing complex social and management system has not been compromised. The researcher has constantly provided critical reflection of the research process with the integration to the firm senior decision makers. Throughout the process of the research, the tasks were always related (i) transparency, (ii) persistent to framework, (iii) maintain transferability, and (iv) ensuring the accumulation of appropriate knowledge gain. The research has achieved good quality results both in solving practical problems as well as generating research outcomes. The research results have enriched both the research as well as practical performance through the integrated single task-force.

The models are applicable to the studied Hong Kong contractors to expand their business to the overseas markets. The models should also be applicable to other contractors in other nations as they have should have experienced in the similar manner except the elements of concern may be varied from location to location as well as nation to nation based on their respective characteristics. A typical example is Kupfer (1980) who reported Bilfinger Berger AG had experienced great risks and serious difficulties during their first step of overseas expansion. Their gain of knowledge was accumulated from valuable experience and operations in various nations. The author further confirms that this study makes sense to the organization and provides interests to relevant researchers because the models (spiral model and dynamic management) provide knowledge through the solution of practical problems in the studies of the practical situation of the Hong Kong contractor. In this regard, the author confirms that the spiral model and dynamic management have a high convergent validity of its operationalization (*the time the construct translates into a functioning and operating reality*).

Action researchers work with local theories with the obligation to transfer their findings to others (Blichfeldt & Andersen, 2006). Hence the need to the construct validity remains through sufficient cross-group examinations. Whilst recognizing this need, the writer believes that this can be reserved for future further investigation.

Internal Validity

- The extent of the phenomena under research is the overseas business development environment focusing on the business development outside the “greater China region”. This complies overseas nations with different culture that comply with the overseas business development.
- The Models are built up based on studies extending over 3 years which allow sufficient time-data collection as well as necessary verification of various phenomena.

- The techniques together with information collected throughout the life span of the research are applicable to the models where contamination may be considered as the maturation of the controls.
- Maturation and development of the learning and understanding of the phenomena is blended together to uncover possible causes, interaction, and impact.
- In complete participation research, subjectivity and objectivity may become a threat to validity. However the insight knowledge of the study may counter-balance the negative effect of subjectivity and objectivity.
- The models presented, developed through an iterative process continuing over a three year period and across several different projects in different business environments, were verified internally through independent participants who confirmed individually the model components and the importance of the learning and knowledge gain to the development of the organisation.
- The complete participation research with researcher acting as the senior leader of the study enabled the elimination of input from participants who behaved abnormally but may not have been able to fully eliminate personal protectionism. This last aspect is not considered as crucial.
- Unusual observation effects can be diminished as the period result and end result will auto-correct the deviation induced, if any.
- Research exhaustion does not occur as this is a realistic case and the intention of the team to learn and make the business development work has induced no doubt.
- The participants of the studies gained knowledge as well as experience throughout the studies. The exercise was meaningful to all participants as they experience reality and this is supported by the information collected.

- The information collected is partly public and partly confidential. The models have integrated all information gathered from various sources and to comprise the model build-up.
- Control of selection and regression of the research was based on treatments and control in order to achieve the overall target of the organization.
- The construct validity of the models is that the case study is an experimental verification of the models and the insights of the studies brings detailed reflection of the phenomena as shown in the models.

External Validity

- The ability to validate the models in a wider industry context through a traditional multi-case study approach was considered impossible because of the business context of the research environment. The models presented for adoption in a wider context of international business development are therefore dependent upon the single case study organisation. This does not invalidate their adoption. Yin (1994) argues that a single case may be used to confirm a theory. In the context of this research, the spiral model and dynamic management model were derived and verified through typical business phenomena and consequently their wider adoption is endorsed. Their wider validation must remain the objective of further research in other organizations by other researchers. (See recommendations for further research.)
- When reviewing the phenomena of the other international companies, the model is considered to be applicable even though the international contractor generalized their experience by a few words: “experienced risks and difficulties in past” (refer Kupfer (1980) in Section 2.5.1).
- The spiral model explains the validity of individual knowledge elements in its width and depth of knowledge in respect of various

stages of development.

- The spiral model also explains further understanding of the knowledge of the target nation will become wider and deeper through time and efforts of the company that is independent of the nation location.

5.10 Summary

This chapter has discussed the overseas construction business development model for contractors who intend to expand their overseas business. It covers the following three major time periods:-

- the company decides to develop their construction business overseas, which is to proceed with the preliminary entry selection and to commence overseas business development selection;
- the strategic planning stage proceeds, with strategy planning, formulation and implementation of strategy, review and evaluation of implementation, development of the decision making process; and
- the tendering stage, whereby the company is putting its efforts in the target market and tests its strength and capacity through tendering process.

These three different stages marked different commitments of the company to overseas business development prior to award of contract. In case the commitments can hardly be made, the company always has the opportunity to pull out of the market and consider other markets easily. However, once awarded the contract, the company will not be able to pull itself back out of its overseas business development mission. In another words, tendering is the final test of the overseas business development operations and is also the point of no return to the company.

Obviously the company is able to back out after the execution of their

first project. But this is not that preferable as the risk management of the company can be evaluated and decided upon during the pre-award period. Any major negative findings during the project execution stage might be catastrophic. Hence, risk management is the key discipline addressed throughout the pre-award and post-award phases of the overseas business development process.

No matter how risk management is carried out, the knowledge gained through learning in the target nation is of utmost importance to the overseas business development and this is demonstrated by the spiral model built specially for this purpose. Through this model, it should be appreciated that the width and depth of knowledge gained through learning over time should be always reviewed, analyzed and decided upon in relationship to the core capacity of the company. Only the right balance between core capacity and knowledge gained by the company will serve as the foundation for its overseas business development operations. Furthermore, due to an ever changing environment, together with the ever increasing knowledge of the company, dynamic management should be employed throughout the development. Hence, implementation of a comprehensive decision-making process related to the changing environment or knowledge should not be delayed or ignored. This decision-making process should be directed in a dynamic way to ensure correct information, communication, coordination and good decisions made at the right time.

6. Conclusions and Recommendations for Future Research

6.1 Introduction

This thesis has examined the various theories and models of contractors carrying out overseas construction business development through a case study based on mixed action research methodology integrating complete participation, active participation and complete observation. This research approach explores various ideas, appreciation, critical thinking, learning and practices in the construction industry affected by the complex social environment. The studies examine a number of research questions that reflect complex organizational changes, sophisticated management processes and social environmental concerns. The fundamental question was how should international contractors expand their construction business to overseas market(s) and minimize their uncertainties and/or risks during their expansion process. This question developed a number of sub questions including:

- Why do Hong Kong contractors want to expand their business overseas?
- How do Hong Kong contractors select their overseas construction market(s)?
- How will Hong Kong contractors retain competitiveness in a foreign environment?
- How will Hong Kong contractors gain their required knowledge through large number of unknown elements and set up their overseas operations?
- How should Hong Kong contractors avoid risk when working in a foreign environment?

This chapter summarizes the findings from the research and provides

details of directions for further research. Before that the aims and objectives of the research are reviewed.

6.2 Aims and Objectives of the Research

Aims of the research

Contractors need to consider expanding their business to the international construction market for survival and continuous growth. In order to achieve that, contractors have to become “real” international contractors to compete in international construction market rather than becoming large local contractors that can compete with international contractors in the local construction market. The aim of the research is to establish a structured approach to assist contractors to re-define their continuous development from the perspective of expanding their business to the overseas markets.

Objectives of Research

To achieve this aim the following objectives were identified:-

- To study the latest developments of the Hong Kong construction market and its impact on Hong Kong contractors;
- To identify the current thinking of Hong Kong contractors with respect to expanding their construction activities overseas;
- To review previous models of international business development and to identify the key elements that need to be considered for the successful development of overseas business;
- To critically assess the overseas expansion experience of a large Hong Kong based Contractor Organization; and
- To produce a model for Hong Kong or any Construction Organizations seeking to expand their business overseas.

All the above mentioned objectives of the research have included risk elements that are crucial to contractors working in a foreign environment.

The first objective, to study the latest developments of the Hong Kong construction market and its impact on Hong Kong contractors, has been achieved by a review of current and recent literature including government data plus further separate studies, undertaken in 2004 and 2008, supported by the use of structured questionnaire surveys the top management of Hong Kong contractors through face to face interviews. These studies provided a 'longitudinal study' view of the changes in perspective over the duration of the research.

The second objective, to identify the current thinking of Hong Kong contractors with respect to expanding their construction activities overseas has been achieved by the structured questionnaire surveys and the face to face interviews. As the surveys and interviews were conducted with the senior management of the contractors' organizations, they provided a unique insight into senior management thinking and the background/history of the companies' strategies for expansion. The case study of a Hong Kong based contractor provided not only an insight to the company's strategic formulating process but a detailed understanding of their actions and re-actions to opportunities and events.

The third objective has been achieved via the literature review. Here the work of Porter, and Downes and Mui were particularly important in providing details of existing models for international development. The elements of Porter's Five Forces provided the basis for the study and the three 'forces' identified by Downes and Mui provided the basis of modern elements of international business development. These 'forces' were supplemented by additional elements identified by the research in the Hong Kong surveys. Use was also made of the SWOT analysis and PEST analysis techniques identified in the literature and used as a basis for parts of the case study data collection.

The fourth objective has been achieved by the case study which integrated 'first person, complete participation' and a comprehensive case study by which the researcher and the company participants were able to collect and review data from a series of ongoing development projects. This provided the critical assessment, the decision making process and the strategic formulating process of the overseas expansion experience of a large Hong Kong based Contractor Organization.

The fifth and final objective, to produce a model for Hong Kong or any Construction Organizations seeking to expand their business overseas has been produced from the literature review and the case study experience, verified on the progress of one project and subsequently validated on subsequent tendering and execution of the projects. The model highlighted the importance of a 'learning' organization, (a spiral model), together with flexibility in management, (dynamic management).

6.3 Findings

Through case study, literature review and industrial surveys, this research has identified the following findings.

6.3.1 Mixed Action Research

The basic objective of action research is to study sophisticated social processes through the engagement of actions to those processes and observe the outcomes of those actions. The action researcher is then able to gain knowledge and contribute in both theory and practices of the studies. Based on these understandings, the author agrees with Rapoport (1970) that "action research aims to contribute both to practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework". In addition, Action Research has to make-sense and be meaningful to those under the investigated complex social systems.

This research focused on the competitiveness of contractors in the international construction market. The case study explored the performance and experience of a Hong Kong contractor developing its business in overseas markets. This insight of the organization through first hand information and the full commitment of the researcher are considered to be of utmost importance. It is crucial to ensure that complex social processes are studied through the application of changes to the business process including both the decision-making processes and the observation of the outcomes of these decisions. This research which achieved this goal has also shown that it is appropriate and justified to adopt first-person complete participation action research where the knowledge gained by the researcher and the related action group is retained and continued.

Participation action research faces various criticisms including, but not limited to, objectivity, collaboration, value, community effort, culture, methods of research, data collection, ethics, data accuracy, and others. The research recorded in this thesis overcame these criticisms and in addition provided opportunities to examine new and different ways in participatory action research methodology.

The integration of complete participation and the active participation action research framework allowed the researcher to take the lead of a team throughout the process of the business development of the company under study. The researcher was then able to conduct relevant inquiries to all types of underlying assumptions and beliefs. He was also able to integrate different options, reconcile multi-discipline roles and perspectives, balance complex power struggle, uncover hidden regulations and perils, and assume the leadership and responsibility in collaborative working relationships thus ensuring the driving force in achieving the overall goal whilst up-holding the culture and harmonious working atmosphere within the organization and the ultimate aim to unfold the processes of transformation of the organization.

In this type of study data were collected and recorded throughout the life-span of the study. This required that data and information were recorded in the form of board meeting minutes, organizational strategic development plan including its yearly rolling amendments and notes of the researcher. Such information and records are normally considered confidential and restricted from disclosure to the public. The research undertaken identified knowledge and actions directly performed by the organization members who also happened to comprise the research team. Furthermore, the research also reveals consciousness in all types of unresolved issues which are identified and reserved for further exploration.

As mentioned above, action researchers go through complex social processes by introducing changes into the process and then observing and introduce adjustments to those changes. Ethical issues do not formulate a major problem because the common goal and drives of the group usually do not generate additional problems other than nominal personal issues that are considered generally unavoidable. However, from a scientific viewpoint, the complete participation action research may still raise an ethical and objectivity concern of the researcher. These concerns may be viewed as qualifications to the research but do not invalidate its end result. It is argued that the research approach adopted in this thesis qualifies as a valid action research and produces valid and valuable knowledge within the paradigm. The research was not designed to test a hypothesis but was aimed to understand the research situation and discover the theory implicit in the data and information assimilated. This aim, alongside the specific aims and objectives of the research was achieved.

6.3.2 Developed Theories and Models

This thesis identifies that construction companies typically seek international business development in order to survive and/or to maintain sustainable development. This may be precipitated by

the home environment becoming more competitive through increased competitions from 'local', (home), contractors competition but may also arise from international contractors entering the home market. The competitiveness of the contractors, no matter they are domestic or international, competing in local or international markets, is the critical survival factor.

Past literature has indicated that it is easier for construction companies to enter a country where the local construction market is underdeveloped and has less economic barriers. In another words, the entry mode is dependent upon a market that is imperfect. These imperfect international construction markets offer attractive opportunities for both advanced and developing countries contractors to expedite their overseas construction business development. However, it should be noticed that corruption can be considered as a major concern when entering these 'imperfect' markets. The European Community nations have recently implemented new stringent codes of ethics for the European international contractors to fight against corruption. Such stringent codes have reduced the desire of the European contractors to enter these 'imperfect' markets.

The development of international construction business development is becoming a world-wide business model adopted by numerous construction enterprises. When reviewing the present world class international contractors listed in the Engineering News Record top 225 international contractors, most of these companies have extensive experience of carrying out overseas operations. Recent published literature reveals that international contractors are seriously affected by the drastic changes in the business environment. Each of these international contractors has experienced tough and difficult learning process during the course of overseas business development. Their knowledge gained through this difficult business environment has made them more capable to face and handle risks and uncertainties whilst they are

executing overseas business development. However, it is noticed that there are insufficient systematic studies conducted to summarize and study these valuable experiences and formulate them into theories or structured models.

New comers of the international construction markets needs to conduct their own studies in both width and depth of the macro and micro external environment and then make necessary decisions for their own overseas development strategic planning. The case study of this thesis reveals local, (target nation), knowledge including local relationship, local resources, political, economical, cultural, supply chain and other relevant elements has to be gained through thorough investigation, study, learning, experiencing and analysis in the target nation by the organization. Views or recommendations from literature, consultants or other outside sources regarding these mentioned elements may become an important reference to the organization but cannot be adapted and used without exercising sufficient due diligence check to this information. It is, therefore, important for the enterprise to conduct its own intelligence accumulation, comparison and analysis to ensure acceptable width and depth of knowledge gained for the enterprise to formulate its own business development strategy.

This thesis, through literature review, surveys and case study, identifies the macro & micro external environmental elements that are the important factors to any company that intends to expand its business to overseas markets. Amongst all these macro and micro external factors, this thesis identifies development strategy, collaborative culture and risk management as having crucial influence to the competitiveness of the organization in the overseas business development. In order to embark such expansion, the management of the company has to maintain a collective open mind to encourage knowledge to be gathered both in width and depth over a period of time to ensure the strategy is set in the right track, the collaborative culture is built-up within or associated the

organization and risk management is efficiently executed.

Through the studies of Hong Kong contractors, it has been identified that their main concerns in the development of overseas business are political stability, market potential, guanxi for entry, good margin, security and knowing the target nation. In addition to the above main elements of concern the management ability, as well as the core capacity of the organization, was also found to be critical to the performance of an organization. The success of international operations depends to a large extent on the company's capability in managing serious difficulties and enormous risks arising from the influence of the business environment including global or target nation's economic and political changes. International contractors usually possess competitive advantages that local contractors do not possess. These advantages may comprise technical knowledge, new production processes, tracked experience, financial capacity, and, in some instances, labour and professional resources. Where commercial opportunities, minimum economic and political barriers exist the market becomes attractive to international construction organizations.

When entering foreign markets, the final products of the construction sector are normally produced 'locally', regardless of whether the materials are imported or locally produced or the final products are produced by local or imported man-power. In addition, it is important to recognize the impact of the 'local' elements including relationships and connections. In this respect, a strategic alliance approach has become an important strategic approach in addition to the market imperfection theory, location-specific theory and firm-specific theory. The strategic alliance approach is now widely adapted by international contractors pending upon their own assessment related to their core capacity and barriers of the local market.

Based on the primary concern of the company's survival and sus-

tainable development, it is recognized that the core capacity of the organization is the most critical element in the determination of the company's success. Core capacity of the company is the most important factor when considering, together with the external and internal environment that affects the mode of entry, strategic planning, tendering and also execution of projects of the organization when developing business in the foreign nation. All the external environmental issues discussed, including home market environment, industrial competitiveness, home market economy fluctuation, target nation business environment, target nation political environment, target nation cultural impact, target nation taxation and legal system, target nation market potential, target nation safety exposure, and target nation local advantages are factors that will have influence or impact on core capacity. The company's internal resources inclusive of human resources, financial resources, IT system, organizational culture and management capacity must remain strong, confident, and resolute whilst being flexible and open to ensure the company is capable of dealing with the impact and influence of the external influencing factors. This is considered critical to the success of the company's international business development.

In addition to the core capacity, it is also important to have the right team, right leadership and collaborative teamwork throughout the whole company for overseas construction business development. Without these fundamentals, the company will find it difficult to succeed owing to the difficulties, uncertainties and risks they face during such development. The company that identifies and implements the synergy and balance of these factors will be the company that succeeds in its international business development.

The factors under consideration do not remain fixed. All kinds of factors within both the external and internal environment are awaiting the discovery of the contractors. The evolution and changes for all these elements are the tests to the strategic plan-

ning and also management judgment and decisions.

It is crucial for organizations to understand that the external environment is changing in respect of time. Therefore, time is an essential element critical to any strategic planning in overseas construction business development. The gaining of knowledge will never stop as the business environment is constantly changing. Hence management must be well prepared to induce dynamic management as well as provide strong leadership to ensure that knowledge gained of the foreign market(s) is well received, gathered, analyzed and handled by the company.

The above mentioned findings have revealed two important models for overseas construction business development. The first model is the spiral model which is a knowledge based and learning model. The model emphasizes the importance of gaining knowledge in both width and depth in respect of time and correlate the knowledge always with the core capacity of the organization. This model enables the organization to gain sufficient knowledge to justify its strategic planning and risk management in overseas business development. The second model is the dynamic management model which encourages the organization based on their sound knowledge and experience to respond promptly to the changing environment to ensure the organization is able to survive and continual develop in the current turbulent economy environment. These models are particularly useful for companies embarking on overseas business development for the first time.

This thesis provides the road map of both methodology and theory develop progressively as knowledge and experience accumulate. The end result is responsive to the situation in which the research is done. There is a continuing search for evidence throughout the process of this research. The findings are driven by the knowledge and experience gained in such a way that the final shape of the theory or model is likely to provide a good fit to the practical

situation. This finding is in line with the two critical suggestions of Glaser (1992, 1995) including (i) it fits the situation; and (ii) it works and helps the people in the situation to make sense of their experience and to manage the situation better.

6.4 Conclusions

The research has identified the following conclusions.

Knowledge is the essence of all research. Through research design, the author concluded that participatory action research with the author's complete participation is able to ensure that this research can obtain the first hand information and the insights of the organization's strategic planning process, decision-making process as well as the management process. Furthermore, the senior management position of the researcher enables him to obtain the width and depth of the value of the research. The dual capacity of researcher and senior management enables him to conduct relevant inquiries to underlying assumptions and beliefs of both the enterprise and the research, to ensure the driving force in achieving both the organizational and research goal, to up-hold the culture and harmonious working atmosphere within both the research team and the organization, and to unfold the processes of transformation of the organization. Even though a holistic and 'ideal' situation may not have been feasible, 'sense-making' and 'critical reflection' of all experience and knowledge gained has been achieved.

The pre-award period is crucial to the overseas business development. All the knowledge and experienced gained through this period of time prior to tender submission should be reviewed, analyzed and justified by the management. In cases of conflict with the core value or adverse findings to the business development objective of the organization, the decision of expanding business to the target nation is reversible. Such reverse in decision will only cause limited loss of time and money to the organization and not result in a wrong strategic move with subsequent long term effects. This thesis together with its research aim is fixed

within the period of the overseas business development pre-award stage including preliminary entry selection stage, strategic planning stage and tender stage.

In addition to Porter's five forces and Bradford's seven forces, the author concluded that the prime factors of a modern organization considering overseas business development management should include guanxi (relationship), competition (margin), market potential (economy), security, local knowledge, regulatory environment and management. These seven new factors are more appropriate to the current knowledge and experience of the international contractors and will be enable the organization to have better chance of success in their international business development.

The importance of the spiral model is that it is a process model which allows the management and the action team to explore the knowledge of unknown markets to the required width and depth in relationship with the time. Furthermore, the width and depth of the knowledge and experience gained through macro and micro external environment should always be co-related to the core capacity of the organization. Hence, the organization is able to analyze and compare the knowledge and experience gained with its core capacity. In this respect, constant comparison is the heart of the process. The outcome of such analysis and comparison will enable the organization to design/derive a suitable and justifiable strategic planning for overseas business development.

Prompt, continuous and appropriate management decision-making processes in response to the ever changing environment of the contemporary business world are of the utmost importance. In addition, the decision-making processes of the organization management have to maintain a strong, confident, firm with necessary flexible and open mind to react upon the knowledge and experience gained from the target market. Such a dynamic management model shall achieve a responsive and well-thought-through decision-making process that will ensure the organization to obtain a better chance of success.

The thesis concluded that the strategic planning stage for companies intending to carry out international business development for the first time should be divided into two more clear stages i.e. the preliminary selection stage and strategic planning stage. These two different stages will allow companies to carry out effective investigations and studies and find out whether the development outline overseas expansion plan matches the core competence of the company and the selection of target nation(s) is appropriate. The above mentioned staging can be considered as the phasing of the spiral model that provides exploration opportunities for companies in understanding and selecting its target overseas market(s).

This thesis concluded that the management of the international company must have full appreciation of the spiral model, understand the core capacity of the organization and allow sufficient time for the business development group to explore the width and depth of knowledge of the target nation in a timely manner. Inadequate short term exploration to the target nation(s) may induce unexpected pitfalls that might damage to the company's endeavours. The thesis provides the road map for those contractors intending to expand their business to overseas/international construction markets. The market study is the basis for the organization in making necessary decisions. The width and depth of knowledge of the target nation gained through research and study is critical for the company to guarantee its success in business development. The spiral model and dynamic management emphasizes in the strategy planning decision making processes with the joint consideration of both the knowledge gained and practical core capacity of the organization. The final justification and decision of the management on the development of overseas markets will then be based on sound ground of knowledge and experience. The entry preparation procedures and actions taken by the organization form the basis for overseas business development. The author, therefore, argues that sound and good quality research and study to the target nation will form the sound base to the organization in resolving problems and providing

critical reflection of the realistic situation.

6.5 Recommendations for Contractors and Researchers

This thesis reveals an important underlying advice for overseas business development to all the contractors and researchers that is “precaution is better than treatment”.

This thesis, through its complete participation action research process, concluded that it is critical to consider the full integration or blending of action research, learning process and changing process. There is no change unless there is learning; there is no learning unless there is personal learning. Complete participation action research provides the tool for both learning and changing to individual person as well as organization. Hence complete participation action research can be expressed per the following formula: complete participation [represented by personal action (change)] + action research [represented by organizational action (change)] + research [represented by learning]. Therefore in conclusion, the complete participation research provides an end result that decision making processes make-sense only with sound knowledge and experience gained through continuous learning and practicing.

The above mentioned research focused on the pre-award stage of the organization's business development. The whole process takes place before practical project execution. Hence the learning process has become an early alarm system to the organization. In this respect, this thesis reveals a crucial underlying advice to all the contractors and researchers in their overseas business development studies that is “precaution is better than treatment”.

This thesis recommends that spiral model and the dynamic management are both part of the precautionous actions taken by the organization who intend to expand their business to the overseas markets. This can be considered as part of the risk management process. However, be-

cause of the macro and micro external environment considered in the theory and model, opportunity is not neglected. Risk can endanger profit but without opportunity there is no profit. Therefore, the spiral model and dynamic management theory suggests another important message that is balance of risk and opportunity with which the sustainable development of organization can be ensured.

Keeping pace with the growing activities of international business in the construction industry together with the significant increase of alliance working of practitioners and researchers, the integration of the practical and academic research and study plays an increasing important role. The range of viewpoints and models published in the modern construction business development sector is limited. Whilst a larger scale programme of research within this thesis was not possible there is no doubt that such a research is needed by the industry. The challenges and opportunities of the industry will provide motivation for further research to be carried in this respect. It will become strongly and increasingly incumbent on the construction industry to recommend a good and sustainable recommendation to the practitioners through joint research effort of the academics and practitioners for international business development.

6.6 Recommendations for Future Work

The research findings from this thesis provide a starting point for other researchers seeking for better understanding of the international business development in the construction industry.

The influence and effectiveness of complete participation action research should be further examined. Even though the author has strong confidence in the complete participation research, the academic argument of scholars on the cons and pros of such action research may continue. In the experience of the author this research has proved that insight and high quality information can be obtained through this type of research methodology. Others may argue that this type of research

limits independence and objectivity. Further studies using similar research design and approach are suggested to fully evaluate the limitations of the method.

The seven forces including guanxi (relationship), competition (margin), market potential (economy), security, local knowledge, regulatory environment and management identified by the author require further testing to proof their value as the critical elements of the overseas business development.

More study and research is necessary for the better understanding and improvement of the international construction business development as this research was based only on the studies of Hong Kong contractors where initiatives in overseas business development are only in their infancy.

The author does not believe that there is one single model that can be applied by any contractor seeking to develop business internationally. It is really an art of matching and balancing all the factors that will impact the survival and development of a company following the business chain in the particular international market. This research provides a platform for contractors to use in their consideration in expanding their business overseas for the first time. Additional models need to be identified and discussed.

In Hong Kong, the studies carried out by the author indicated that a large number of Hong Kong construction companies do not have a clear vision for international business development apart from a very few companies already committed to focusing on international construction business development. Further studies shall be conducted in Hong Kong or other parts of the world to explore the environmental impact to the strategic planning of the organizations intending to development their business to the overseas markets. In particular, insufficient studies have been conducted to compare the practical performance of the contractor versus drastically changing environment in overseas business devel-

opment area. This research provides the process orientated models, including the spiral model and the dynamic management model, that allows contractors to correlate the width and depth of knowledge with time and core capacity of the organization where knowledge and time are evolving and the core capacity is considered, within the process period, a constant. Furthermore, insufficient studies have been conducted for dynamic management where traditional management theories and practices can be applied when environment is changing drastically in respect of time and in the longer period in respect of core capacity.

It is appreciated that in depth study of the above is difficult whilst the organizations are reluctant to allow studies to be conducted that relate to their insight review of decision processes. Further, the research on Hong Kong contractors and/or other international contractors in their potential for overseas construction business development could be more comprehensive. The limitations of this research are mainly due to the fact that the research relates to the core decision making processes and other sensitive areas considered as confidential information by business organizations. However, the author strongly believes that such study is critical to the drastic changing business environment and particularly important to the exposure of complex global business environment. Such complex global business environment is further complicated by the human factors that includes, but not limited to, professionals and senior management staff who are reluctant to commit to engage in overseas business development. Such reluctant behaviour of the staff may be arising mainly from their uncertainty of the risks they are going to face in their overseas assignments.

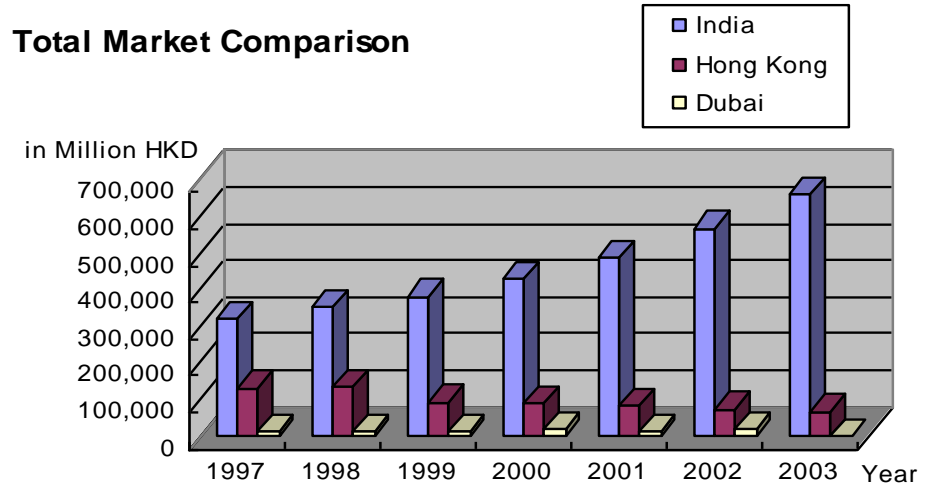
It is recommended that opportunities for further research based on the models that have emerged from this study should be created and organized to verify and explore enhanced models to illustrated the complex and complicated overseas business development strategic formulation and process occurring during the drastically changing business environment where influential factors are numerous and sometimes hidden.

Global construction business development is the trend and further studies will enable contractors to understand better what they are going to face and how they have to react to ensure a successful business model for their organization is achieved.

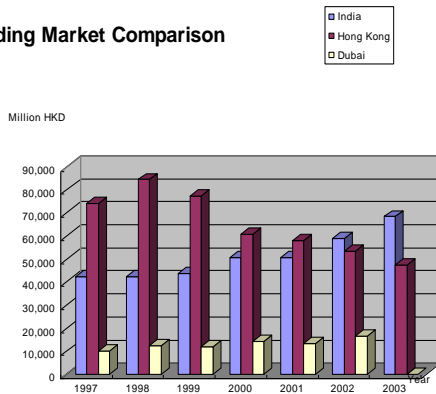
As a conclusion, the author believes that the learning organization adopting the recommendations of this research should be able to compete in the international construction markets rather than competing only in the domestic market with the international contractors.

Appendix A

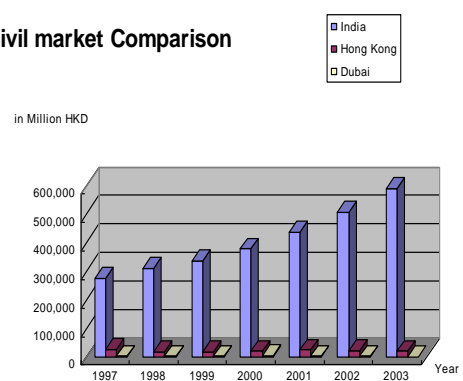
Market Comparison of the Selected Markets – India, Dubai & Hong Kong (analyzed in 2004)



Building Market Comparison



Civil market Comparison



Appendix B

Profit Marking Comparison Between India's Fastest Growing Construction Companies

Rank Com pany	Revenue (Million HK\$)			Profit (Million HK\$)			(Profit/Revenue)%		
	01 ~ 02	00 ~ 01	99 ~ 00	01 ~ 02	00 ~ 01	99 ~ 00	01 ~ 02	00 ~ 01	99 ~ 00
Maytas Infra	194.16	96.83	273.99	6.90	5.07	201.42	3.55%	5.23%	73.51%
Madhucon Projects	340.60	198.27	167.31	18.85	7.97	6.89	5.54%	4.02%	4.12%
Soma Enterprise	306.03	369.46	298.81	16.39	22.71	14.76	5.35%	6.15%	4.94%
IVRCL	665.89	448.24	339.01	22.29	21.78	15.39	3.35%	4.86%	4.54%
Jaiprakash Ind.	2,602.82	2,749.53	2,092.99	217.57	167.96	69.00	8.36%	6.11%	3.30%
JMC Projects	413.25	298.83	237.59	5.76	2.96	9.59	1.39%	0.99%	4.04%
Jog Engineering	131.60	197.83	171.16	4.93	6.38	9.78	3.75%	3.22%	5.71%
IRCON International	1,541.93	1,283.76	855.73	324.19	111.54	78.69	21.02%	8.69%	9.20%
Gammon India	880.04	857.53	769.51	33.44	25.26	23.77	3.80%	2.95%	3.09%
U B Engineering	228.60	347.51	319.12	-27.42	-24.24	-0.65	-12.00%	-6.98%	-0.20%
Valecha Engineering	86.90	46.97	75.92	6.49	9.08	7.43	7.47%	19.33%	9.79%
Dredging Co. of India Ltd.	833.29	709.04	499.87	197.35	162.45	99.40	23.68%	22.91%	19.89%
Nagarjuna Cons. Co.	745.50	415.33	354.11	22.46	8.55	36.40	3.01%	2.06%	10.28%
Larsen & Toubro	13,438.40	12,543.71	11,825.35	589.56	535.60	580.77	4.39%	4.27%	4.91%
Hindustan Cons. Co.	788.70	672.52	591.52	72.40	58.84	36.38	9.18%	8.75%	6.15%
Skanska Cementation	518.52	337.08	426.41	13.92	13.26	9.59	2.69%	3.93%	2.25%
NBCC Ltd.	702.58	528.17	484.06	6.27	2.74	20.89	0.89%	0.52%	4.32%
KEC International	839.19	881.11	1,636.11	-109.38	-84.05	14.67	-13.03%	-9.54%	0.90%

Source: Construction World (Annual Issue 2003)

Appendix C

Responsibilities of Key Stakeholders in Tender Management Procedures

Management of CSCHK – the Executive Directors of the Company

- Decision to prepare tender
- Approval to proceed based on the OBD Tender Approval Form including project details, overview of risk and estimate of tender margin
- Approval of Consortium or Joint Venture partners, if any
- Approval of architect or engineer if any
- Approval of JV or pre-bid agreement
- Management of tender & financial arrangements for project execution
- Ultimate responsibility for the management of the project

Management of Overseas Business Development Dept. is represented by the General Manager

- Appoint Tender Manager (in case of JV or consortium)
- Manage all communications with the Client and/or his representatives (as appropriate), i.e. receive from and submit to the Client any correspondence and arrange for distribution to the Tender Manager as appropriate or delegate this task to the Tender Manager
- Manage all communications with the Joint Venture or Consortium partner, i.e. receive from and submit to the Joint Venture or Consortium partner any correspondence and arrange for distribution to the Tender Manager as appropriate or delegate this task to the Tender Manager
- Responsible for the selection of JV/consortium partners and submit to CSCHK Management for final approval

- Responsible with partners for the selection of architects/engineer as appropriate and submit to respective Managements for final approval
- Manage the preparation of JV and pre-bid agreements
- Manage and supervise the tender and prequalification exercises of the Tender Manager and team
- Approve tender submission

JV Management / Management of Subsidiary

- Approve tender strategy
- Approve Tender Manager
- Approve appointment of architects/consultants (if necessary)
- Approve tender budget (based on authority issued)
- Review and approve tender
- Establish tender margin
- Approve the tender submission

Supporting Departments (applies only if involved in the tender process)

- Support, control and advise the actions of the supporting personnel
- Support the Tender Manager in developing the tender strategy when required
- Review tender budget for internal costs and shared external costs
- Allocate appropriate internal and external resources
- Review and support tender preparation generally, and specifically:
 - Review design content of tender
 - Review construction methods and planning of tender
 - Review risk assessment analysis
- Review relevant details of estimate
- Attend Tender Group meetings as appropriate

- Assist and arrange necessary financial facilities

Planning Engineer

- Prepare construction plans and methods for estimators
- Prepare Construction schedules for tender
- Prepare labour schedule and discuss with HR Dept. for supply rates
- Participate in risk assessment workshops
- Reconcile labour resources with estimator
- Arrange, chair and minute design reviews especially in regard to practicability of designs and ensure feedback for action.
- Develop and manage the design process (internal and external) and assist, if required, quantity take-off and distribute to the respective parties
- Identify risks associated with the designs chosen and provide these risks and consequences to the Tender Manager for inclusion in the Risks and Opportunities List

Estimator

- Manage the estimating process in accordance with jointly agreed estimating procedures and following the requirements
- Determine the estimate format and distribute to JV partners
- Collate base labour, material and plant rates, and process
- Assist Tender Manager in preparing the Tender Review Report
- Assist the Tender Manager in preparing the Risks and Opportunities List
- Assess, in conjunction with the Financial Dept., any currency risk, major negative cash flow and escalation exposure
- Provide base labour, plant and material rates and agree with JV Partner

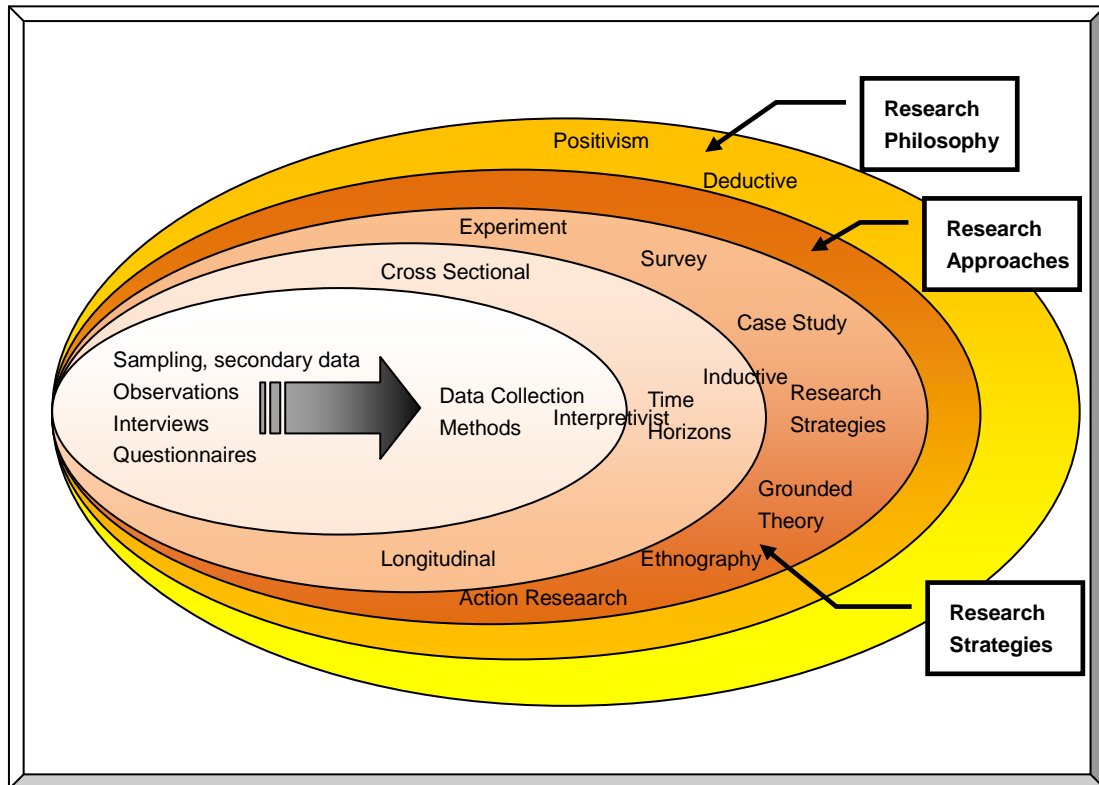
- Assist the Tender Manager in preparing the Final Tender Review Check List
- Prepare the Tender Top Sheet
- Maintain an audit trail of all tender adjustments

Commercial Manager

- Manage the commercial aspects of the tender preparation
- Prepare jointly with Tender Manager the tender budget
- Establish tender and execution phase agreements with all consultants and consult Commercial Dept. as needed
- Manage the process of requests for and assessment of quotations from suppliers and subcontractors and ensure CSCHK procedures are maintained and co-ordinate with the CSCHK purchasing department as and when required
- Review all Contract documents in view of commercial aspects and support the Tender Manager in preparing the Tender Review Report
- Request, manage and review comments on the Contract insurance provisions
- Attend risk assessment workshops and ensure outcomes in view of commercial aspects are evaluated and included in the Risks and Opportunities List
- Assist the Tender Manager in preparing the Final Tender Review Report and managing all ensuing actions
- Review cash-flow jointly with the Estimator for the Final Meeting
- Manage all matters related to required insurance and export risk guarantees
- Arrange financial related facilities including but not limited to bank guarantees, insurance, exchange rate and tax planning, import duties etc.

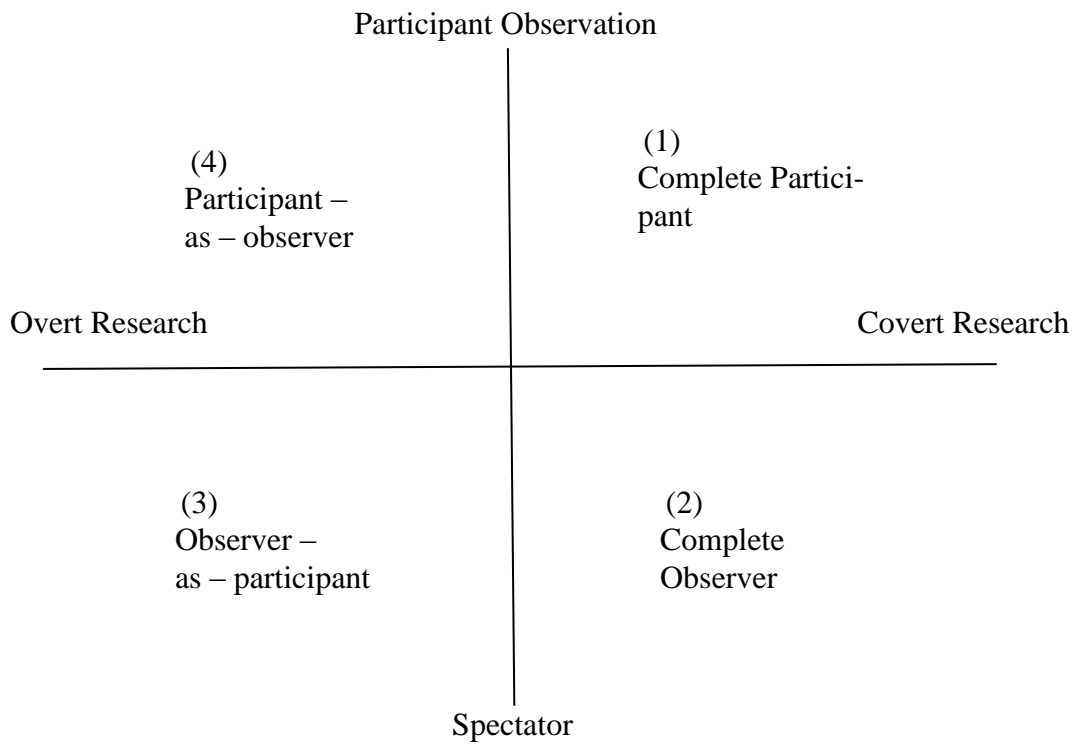
Appendix D

The Research Onion (Saunders, Lewis & Thornhill; 2003, p. 83)



Appendix E

A Taxonomy of field Role (Gill & Johnson, 2002, p. 149)



Appendix F

Questionnaire for Risk and Tender Management for Overseas Business Development - 2004

This is a PhD research investigation for a dissertation called “Risk and Tender Management of Hong Kong Contractors expanding their business to overseas markets”. The purpose of this investigation is to explore the managerial aspects of enterprises located in Hong Kong and to assess in particular the importance in the risk and tender management of the Hong Kong construction companies carrying out or intending to carry out overseas (including China) construction activities.

This interview is mainly for academic research and the questionnaire are answered without registering your name, unless otherwise agreed. Please kindly answer all questions based on your best knowledge and perceptions.

This questionnaire will take about 40 minutes of your time. Your kind comments and feedback will be extremely valuable to the research.

Thank you very much for your kind assistance and cooperation.

Best Regards,

PhD Student : CHEONG, Chit-Sun (Mr.)

Dissertation Supervisor: Professor Andrew Baldwin

Instructions

This questionnaire on risk and tender management is to be completed through interview with at least one member of top management of the firm.

Section A – General Information of your Company

1. What is the type of enterprise is your serving company?
 - (a) Listed Company operating in HK but registered at _____
 - (b) Private Limited Company
 - (c) Private Company

2. Turnover of your company

HKD _____ per annum
(please provide the turnover for the last 3 years)

3. Business nature of your company (based on turnover)
 - (a) Percentage (%) of Construction Business _____
 - (b) Other business _____

4. Main construction Business Nature of your company
 - (a) Local Construction business
 - (b) International Construction business (including China and Macau)

5. Your company has separate section(s) or department(s) for international business
 - (a) Yes
 - (b) No
 - (c) Not yet, but under consideration

6. The international construction business of your company covers the following cities:-

7. When your company commenced international construction business?

Section B – Overseas Development

1. Is overseas business development one of your company objectives?

2. When did your company start overseas business development?

3. Why did your company consider overseas business development?

- Diversify your construction business to more areas
 Local construction market insufficient to maintain survival
 Opportunities offered by other market
 Increase turnover
 Other reason _____

4. Which market is the first overseas market you choose?

5. How many overseas market(s) have your company penetrated and where?

6. What are the main considerations when you enter overseas market?

- (a) political stability
 (b) size of the market
 (c) potential of the market
 (d) Easy entry due to existing "guanxi"
 (e) Excessive resources within organization
 (f) Market known to have good margin
 (g) Visited and knew the market
 (h) attractive policy of the area
 (i) Other reasons(s) _____

7. If you can kindly rank the importance of the above considerations?

	Not important			→	Important		
	1	2	3	4	5	6	7
a political stability	1	2	3	4	5	6	7
b size of the market	1	2	3	4	5	6	7
c potential of the market	1	2	3	4	5	6	7
d Easy entry due to existing "guanxi"	1	2	3	4	5	6	7
e Excessive resources within organization	1	2	3	4	5	6	7
f Market known to have good margin	1	2	3	4	5	6	7
g Visited and knew the market	1	2	3	4	5	6	7
h attractive policy of the area	1	2	3	4	5	6	7
i Other reasons _____	1	2	3	4	5	6	7

8. What other considerations do you when entering overseas market?

9. Who are the decision makers for overseas business development?

- Chairman/Managing Director _____
 Board _____

10. Do you employ consultant to advise you whether you expand overseas business?

11. Do you have any formal & systematic reporting system for you to make the decision?

Section C – Risk Management

1. Does your organization consider opportunity more important than risk?

Yes / No

Why _____

2. Does your organization have risk management for the following activities?

- | | |
|---|----------|
| a. Before deciding to expand overseas business | Yes / No |
| b. Decide to launch business at certain country | Yes / No |
| c. During tendering stage for project(s) | Yes / No |
| d. During execution of the project | Yes / No |

3. How does your organization approach risk assessment?

4. If your organization adopts a certain type of risk assessment methodology, please indicate what risk assessment tool(s) you use:-

5. If your organization didn't adapt any of the above (Item 3 & 4), what kind of approach do you use?

Section D – Tender Management

1. Does your organization have a fixed tender management procedure?

Yes / No

2. Please indicate your prime emphasis in tender management:-

3. When you are tendering for overseas project, do you use the same tender management procedure?
Yes / No
Why _____
4. Usually the tendering period is short, how do you control the tender preparation progress?

-
5. What are the critical concerns in your tender management?
(a) _____
(b) _____
(c) _____
(d) _____
(e) _____
6. Do you monitor your tender cost?
Yes / No _____
7. How do you assess the effectiveness of your tender management?

Section E – Data of person interviewed

Company Name : _____

Title of Person interviewed : _____

Name of Person interviewed: _____

Gender : Male female

Age : 20 – 30 31 – 40 41 – 50 51 or above

Number of staff : ≤50 51 – 250 251 – 500 >501

Please confirm that your name can be exposed. Yes No

Please confirm that I can quote part(s) of your comments/conclusions.

Yes No

Appendix G

Interview Record of Survey in 2004

	Co. Name	Interviewed Person	Position	Co. origin	Turnover	Emphasize	interview
1	Kumagai Gumi Co. Ltd. HK Branch	Hiroyuki Watanabe	General Manager HK Branch	Japan	4 billion USD / annum	Profit	14-9-04
2	NECSO entrecanales cubietas	Robert M. Park	General Manager HK Branch	Spain	3 billion USD / annum	Profit	21-9-04
3	Sun Fok Kong Group	Alan K. C. Chan	Managing Director	Hong Kong	250 million USD/annum	Turnover	13-9-04
4	Kwan Shing Engineering & Construction Co. Ltd	Francis C. K. Fok	Managing Director	Hong Kong	8.3 million USD/annum	Profit	15-9-04
5	Penta Ocean Construction Co., Ltd.	K. Furihata	General Manager HK Branch	Japan	3 billion USD/annum	profit	4-10-04
6	Bilfinger Berger AG	Axel Metzger	Managing Director HK Branch	Germany	7.7 billion USD/annum	Profit	5-10-04
7	Shinryo (Hong Kong) Ltd.	Gilbert H. C. Tsang	President	Hong Kong	400 million HKD	Profit	7-10-04
8	Lam Construction Co., Ltd.	Peter Lam	President	Hong Kong	400 million HKD	Profit	14-10-04
9	Good Mind Engineering Ltd.	Stephen Chuang	Executive Director	Hong Kong	15 million HKD/annum	Profit	23-10-04
10	Leader Construction Co., Ltd.	Yu Sai-Yen	Managing Director	Hong Kong	200 million USD	Profit	26-10-04
11	Shui On Construction Co., Ltd.	Stephen W. K. Lee	Executive Director	Hong Kong	2 billion HKD	Profit	27-10-04
12	China State Construction Engineering (HK) Ltd.	Zhou, Yong	President	Hong Kong	10 billion USD	Turnover & profit	5-11-04
13	CITIC Guo Hua International Contracting (Overseas) Ltd.	Song, Chun	Deputy General Manager	China	2 billion HKD	Turnover & profit	18-11-04
14	Linkforce	David Hurren	Managing Director	Hong Kong	400 million HKD	profit	22-11-04
15	Hsin Chong	S. L. Cheung	Managing Director	Hong Kong	2.17 billion HKD	Profit	28-11-04

Appendix H

Questionnaire for Overseas Business Development - 2008

This is a PhD research investigation for a dissertation called “Hong Kong Contractors Developing Business to Overseas Market: A Study in Strategic, collaborative and Risk Management prior to Contract Award”.

The Hong Kong construction market volume has experienced its golden period between 1983 and 1998 where the market volume has increased from 24.7 billion HKD to a peak of 133.3 billion HKD. Seriously affected by the Asian financial crisis, the Hong Kong construction market volume has gradually decreased to 90.2 billion in 2006. The trend showed the market will continue to shrink in the coming years.

Hong Kong construction enterprises are facing a lot of challenges to maintain their sustainable development in the construction industry. Development of overseas construction business has become a hot topic. The purpose of this investigation is part of the research to explore and understand the expectation and needs of Hong Kong contractors in their planning or actions in expanding their business overseas.

This interview is mainly for academic research and the questionnaire are answered without registering your name, unless otherwise agreed. Please kindly answer all questions based on your best knowledge and perceptions.

This questionnaire will take about 40 minutes of your time. Your kind comments and feedback will be extremely valuable to the research.

Thank you very much for your kind assistance and cooperation.

Best Regards,

PhD Student : CHEONG, Chit-Sun (Mr.)

Dissertation Supervisor: Professor Andrew Baldwin

2008

Instructions

This questionnaire on development of construction business overseas is to be completed through interview with at least one member of top management of the firm.

Section A – General Information of your Company

1. What is the type of construction enterprise is your company?
 - (d) Listed Company operating in HK but registered at _____
 - (e) Private Limited Company
 - (f) Private Company

2. Turnover of your company

HKD _____ per annum
(please provide the turnover for the last 3 years)

3. Licenses obtained by your company:-

Group C :- _____

Group B :- _____

Group A :- _____

4. Business nature of your company (based on turnover)
 - (a) Percentage (%) of Construction Business _____
 - (b) Other business nature _____

5. Main construction Business Nature of your company
 - (c) Local Construction business (Hong Kong)
 - (d) Cross-regional Construction business (extended to China and Macau)
 - (e) Overseas construction business

6. Your company has separate section(s) or department(s) for international business
 - (f) Yes
 - (g) No
 - (h) Not yet, but under consideration

7. The cross-regional / overseas construction business of your company covers the following countries/cities:-

8. What is the focused work sector in overseas business and is that in line with your company's core competence?
-

Section B – Overseas Development

1. Is overseas business development one of your company objectives?
-

2. How is the Hong Kong market shrinking affecting your company?
-

3. How do you see the sustainable development of your company? Through

- promotion of more PPP/BOT/PFI projects in Hong Kong
- provide loan guarantees to local construction industry
- utilize better market intelligent
- lead by HK gov't to explore cross-regional business opportunities
- adapt new demand in Hong Kong construction market,
- improve competitiveness in technology, finance and management,
- form industrial lobby group to accelerate project launching in HK
- develop overseas construction business

4. When your company consider overseas business development, you believe the prime reason(s) are:-

- Diversify your construction business to more areas
- Local construction market insufficient to maintain survival
- Opportunities offered by other market
- Increase turnover
- Other reason _____

5. Which market was the first overseas market you choose? And why?
-
-
-

6. How many overseas market(s) have your company penetrated and where?
-
-

7. What other considerations do you have when entering overseas market?
-

8. Who are the decision makers for overseas business development?

- Chairman/Managing Director _____
- Board _____
- Specific overseas task force _____

9. Do you employ external consultant when you consider expand overseas business? _____

10. Do you have any formal & systematic procedures for you to make the decision? _____

11. If you can kindly rank the importance of the target market considerations when you consider expanding overseas business:-

	Not important			→	Important		
	1	2	3	4	5	6	7
A political stability	1	2	3	4	5	6	7
B size of the market	1	2	3	4	5	6	7
C potential of the market	1	2	3	4	5	6	7
D Easy entry due to existing "guanxi"	1	2	3	4	5	6	7
E Excessive resources within organization	1	2	3	4	5	6	7
F Market known to have good margin	1	2	3	4	5	6	7
G Visited and knew the market	1	2	3	4	5	6	7
H attractive policy of the area	1	2	3	4	5	6	7
I security of the targeted market	1	2	3	4	5	6	7
J Other reasons _____	1	2	3	4	5	6	7

12. If you can kindly rank your concern at the target market when you expand your business overseas:-

	Not important			→	Important		
	1	2	3	4	5	6	7
A Inadequate legal system	1	2	3	4	5	6	7
B Complexity in taxation	1	2	3	4	5	6	7
C Modernization of the country	1	2	3	4	5	6	7
D Hygiene situation of the country	1	2	3	4	5	6	7
E Language barrier	1	2	3	4	5	6	7
F Cultural difference	1	2	3	4	5	6	7
G Trade union strength	1	2	3	4	5	6	7
H Communication difficulties	1	2	3	4	5	6	7
I Working with local people	1	2	3	4	5	6	7

J Other reasons _____ 1 2 3 4 5 6 7

13. Is there problem to motivate staff to go and work overseas?

14. If you can kindly rank your human resources concerns when expanding your business overseas:-

	Not important			→	Important		
	1	2	3	4	5	6	7
A Technical competence of staff	1	2	3	4	5	6	7
B Commercial competence of staff	1	2	3	4	5	6	7
C Management competence of staff	1	2	3	4	5	6	7
D Leadership of staff	1	2	3	4	5	6	7
E Communication ability with locals	1	2	3	4	5	6	7
F Authority delegation	1	2	3	4	5	6	7
G Adjustment of life style to local situation	1	2	3	4	5	6	7
H Remuneration incentive to staff	1	2	3	4	5	6	7
I Motivate the right staff to go overseas	1	2	3	4	5	6	7
J Other reasons _____	1	2	3	4	5	6	7

15. When you mobilize HK staff or recruit new staff to work overseas, please rank your believe of their concerns:-

	Not important			→	Important		
	1	2	3	4	5	6	7
A Remuneration package	1	2	3	4	5	6	7
B Annual leave	1	2	3	4	5	6	7
C Resident overseas together with family	1	2	3	4	5	6	7
D Education to their children	1	2	3	4	5	6	7
E Career development opportunity	1	2	3	4	5	6	7
F Working environment	1	2	3	4	5	6	7
G Living environment	1	2	3	4	5	6	7
H Family support	1	2	3	4	5	6	7
I Not consider no matter condition offered	1	2	3	4	5	6	7
J Other reasons _____	1	2	3	4	5	6	7

16. In your understanding of your staff working overseas, please rank the importance of your staff' main concern when working with locals:-

	Not important			→	Important		
	1	2	3	4	5	6	7
A Communication with local	1	2	3	4	5	6	7
B Language barrier	1	2	3	4	5	6	7
C Working relationship with local staff	1	2	3	4	5	6	7

D	Working with local subcontractors	1	2	3	4	5	6	7
e	Working relationship with local partner	1	2	3	4	5	6	7
f	Working habit difference	1	2	3	4	5	6	7
g	Professional incompetence	1	2	3	4	5	6	7
h	Cultural difference	1	2	3	4	5	6	7
i	Discrimination to foreigners	1	2	3	4	5	6	7
j	Other reasons _____	1	2	3	4	5	6	7

17. In your overseas working experience, please rank the importance of the following information exchange issues:-

		Not important			→	Important		
a	Through long distance call	1	2	3	4	5	6	7
b	Through mobile phone	1	2	3	4	5	6	7
c	Through e-mail	1	2	3	4	5	6	7
d	Through fax	1	2	3	4	5	6	7
e	Through web-based platform	1	2	3	4	5	6	7
f	ITC system set up	1	2	3	4	5	6	7
g	Reliability of web-based connection	1	2	3	4	5	6	7
h	Appropriate software	1	2	3	4	5	6	7
i	ITC management	1	2	3	4	5	6	7
j	Other reasons _____	1	2	3	4	5	6	7

Section C – Risk Management

1. Do you consider opportunity more important than risk?

Yes / No

Why

2. Do you have risk management for the following activities?

- | | | |
|-------|--|----------|
| (i) | Before deciding to expand overseas business | Yes / No |
| (ii) | Decide to launch business at certain country | Yes / No |
| (iii) | During tendering stage for project(s) | Yes / No |
| (iv) | During execution of the project | Yes / No |

3. Does your organization have a fixed tender management procedure?

Yes / No

4. When you are tendering for overseas project, do you use the same tender management procedure?

Yes / No

Why _____

5. What is your approach in risk assessment (quantitative or qualitative)?

6. Do you have special task force to check your overseas tender?

Yes / No _____

7. Please rank the importance of the following risk management issues at tender stage for overseas business:-

	Not important			→	Important		
	1	2	3	4	5	6	7
A Technical risk	1	2	3	4	5	6	7
B Contract risk	1	2	3	4	5	6	7
C Partner/Allaince risk	1	2	3	4	5	6	7
D Payment risk	1	2	3	4	5	6	7
E Tax risk	1	2	3	4	5	6	7
F Legal risk	1	2	3	4	5	6	7
G Supply chain risk	1	2	3	4	5	6	7
H Resources risk	1	2	3	4	5	6	7
I Financial risk	1	2	3	4	5	6	7
J Management risk	1	2	3	4	5	6	7
K Other reasons _____	1	2	3	4	5	6	7

8. How do you assess the effectiveness of your tender management?

Section D – Expectation of Hong Kong construction Industry

1. Please kindly rank the importance of the following that you believe will be of good assistance to the sustainable development of your Company:-

	Not important			→	Important		
	1	2	3	4	5	6	7
a Form industry lobby group for new works	1	2	3	4	5	6	7
b Gov't set-up fund to assist & promote HK construction industry	1	2	3	4	5	6	7
c HK have more PPP/BOT projects	1	2	3	4	5	6	7
d Enhance HK contractor ability to compete with international contractors	1	2	3	4	5	6	7
e China construction industry boom	1	2	3	4	5	6	7
f Macau construction industry boom	1	2	3	4	5	6	7
G SE Asia construction market boom	1	2	3	4	5	6	7
H Middle East construction market boom	1	2	3	4	5	6	7

J	Europe construction market boom	1	2	3	4	5	6	7
K	Other locations _____	1	2	3	4	5	6	7

2. Please kindly rank the importance of the following that you believe will be of good assistance to the overseas development of the Hong Kong contractors:-

		Not important			→	Important		
		1	2	3	4	5	6	7
a	HK Gov't steer leadership	1	2	3	4	5	6	7
b	HK Gov't provide financial assistance	1	2	3	4	5	6	7
c	HK Gov't provide insurance guarantee	1	2	3	4	5	6	7
d	HK Gov't establish incentive scheme	1	2	3	4	5	6	7
e	HKTDC steer leadership	1	2	3	4	5	6	7
f	HKCA steer leadership	1	2	3	4	5	6	7
g	Alliance with other HK contractors	1	2	3	4	5	6	7
h	TDC / HKCA provide intelligent	1	2	3	4	5	6	7
i	Others _____	1	2	3	4	5	6	7

Section E – Data of person interviewed

Company Name : _____

Title of Person interviewed : _____

Name of Person interviewed: _____

Gender : Male female

Age : 20 – 30 31 – 40 41 – 50 51 or above

Number of staff : ≤50 51 – 250 251 – 500 >501

Please confirm that your name can be exposed. Yes No

Please confirm that I can quote part(s) of your comments/conclusions.

Yes

No

Appendix I

2008 Follow-up Survey Interview Records

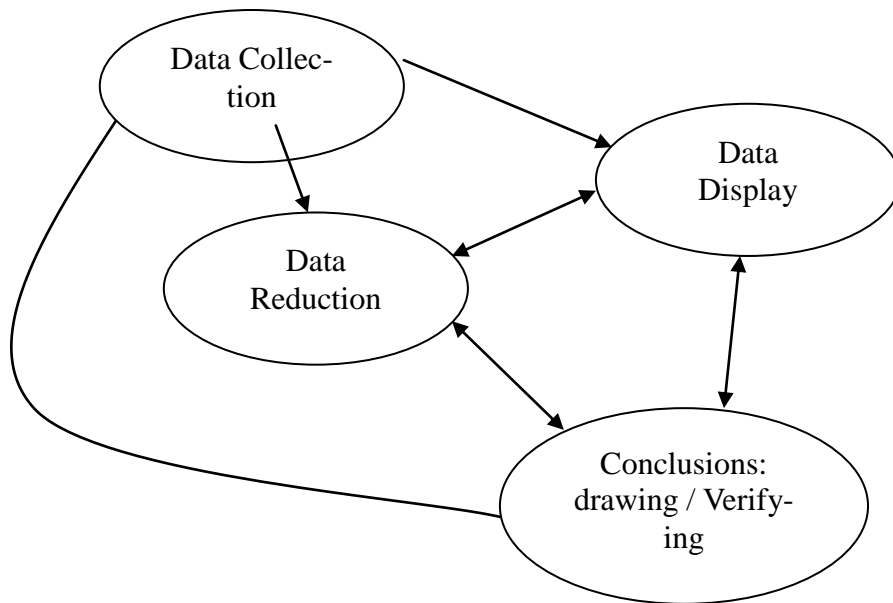
	Co. Name	Interviewed Person	Position	Turnover	Interview
1*	Kwan Shing Engineering & Construction Co., Ltd.	Francis C.K. Fok	Managing Director	25 million HKD/annum	30-Jan-08
2	Hip Hing Construction Co., Ltd.	Allan S.K. Chan	Executive Director	15,000 million HKD/annum	1-Feb-08
3*	Leader Construction Co., Ltd.	Yu Sai-Yen	Vice-Chairman	1,300 million HKD/annum	4-Feb-08
4*	Lam Construction Co., Ltd.	Peter Lam	President	150 million HKD/annum	4-Feb-08
5	Chinney Construction Group	Zuric Chan	Chief Executive Officer	1,800 million HKD/annum	4-Feb-08
6*	GME Group of Companies	Stephen Chuang	Executive Director	40 million HKD/annum	4-Feb-08
7	Wang Lee Construction Co., Ltd.	Ho B.W.	Managing Director	60 million HKD/annum	5-Feb-08
8*	Shui On Building Contractors Ltd.	Stephen W.K. Lee	Executive Director	2,000 million HKD/annum	5-Feb-08
9	Chun Wo Building Construction Ltd.	Derrick Pang	Director	5,000 million HKD/annum	5-Feb-08
10	Chevalier (Civil Engineering) Ltd.	Thomas Yiu	Managing Director	100 million HKD/annum	5-Feb-08
11*	China State Construction International Holdings Ltd.	Zhou Yong	Chief Executive Officer	9,000 HKD/annum	6-Feb-08
12	Build King Holdings Ltd.	Derek Zen	Chairman	1,300 million HKD/annum	20-Feb-08

* denotes interviewed also in 2004

Appendix J

Components of Data Analysis: Interactive Model

Source: Miles & Huberman, (1984)



Appendix K

Data of the Hong Kong Construction Market and GDP

Million HKD	Private sector sites (1)	Private Growth Rate	Public sector sites (2)	Public Growth Rate	Locations other than sites	Total	HK Growth Rate	HK GDP	GDP Growth Rate
1983	11,665		9,583		3,494	24,742		216,383	10.7
1984	12,015	3.0	8,692	(9.3)	4,494	25,201	1.9	260,761	20.5
1985	12,257	2.0	6,900	(20.6)	5,417	24,573	(2.5)	276,823	6.2
1986	13,484	10.0	7,048	2.1	5,384	25,916	5.5	319,232	15.3
1987	16,734	24.1	8,170	15.9	7,645	32,548	25.6	393,541	23.3
1988	21,110	26.2	10,304	26.1	9,288	40,702	25.1	465,245	18.2
1989	24,450	15.8	13,565	31.6	11,674	49,689	22.1	536,268	15.3
1990	29,104	19.0	15,636	15.3	16,569	61,308	23.4	598,950	11.7
1991	32,407	11.3	15,363	(1.7)	16,260	64,029	4.4	690,324	15.3
1992	31,700	(2.2)	17,438	13.5	18,602	67,741	5.8	805,082	16.6
1993	29,458	(7.1)	24,522	40.6	21,359	75,338	11.2	927,996	15.3
1994	36,202	22.9	27,197	10.9	25,773	89,172	18.4	1,047,470	12.9
1995	35,669	(1.5)	37,916	39.4	26,222	99,807	11.9	1,115,739	6.5
1996	40,469	13.5	46,724	23.2	29,097	116,290	16.5	1,229,481	10.2
1997	56,837	40.4	42,146	(9.8)	32,518	131,500	13.1	1,365,024	11
1998	61,233	7.7	40,742	(3.3)	31,341	133,316	1.4	1,292,764	-5.3
1999	44,380	(27.5)	49,173	20.7	32,884	126,437	(5.2)	1,266,668	-2
2000	39,094	(11.9)	50,817	3.3	32,161	122,071	(3.5)	1,317,650	4
2001	40,497	3.6	41,793	(17.8)	31,696	113,986	(6.6)	1,299,218	-1.4
2002	42,292	4.4	32,070	(23.3)	31,638	106,000	(7.0)	1,277,314	-1.7
2003	35,187	(16.8)	32,378	1.0	31,468	99,032	(6.6)	1,234,761	-3.3
2004	28,021	(20.4)	28,533	(11.9)	36,618	93,171	(5.9)	1,291,923	4.6
2005	26,356	(5.9)	22,334	(21.7)	42,160	90,851	(2.5)	1,382,590	7
2006	24,855	(5.7)	17,135	(23.3)	48,240	90,230	(0.7)	1,475,910	6.7
2007	28,973	16.6	14,503	(15.4)	49,390	92,866	2.9	1,616,215	9.5

All data from Hong Kong Statistical Department, HK Government

Appendix L

Independent CSCIH Staff Satisfaction Survey

By The Hong Kong Polytechnic University, 2006

Overall Satisfaction Score by Location		
Location	Total no. of questionnaire returned	Overall Satisfaction Score
India	23	3.59
Hong Kong	1,066	3.45
Dubai	75	3.44
<i>Total</i>	<i>1,164</i>	<i>3.45</i>

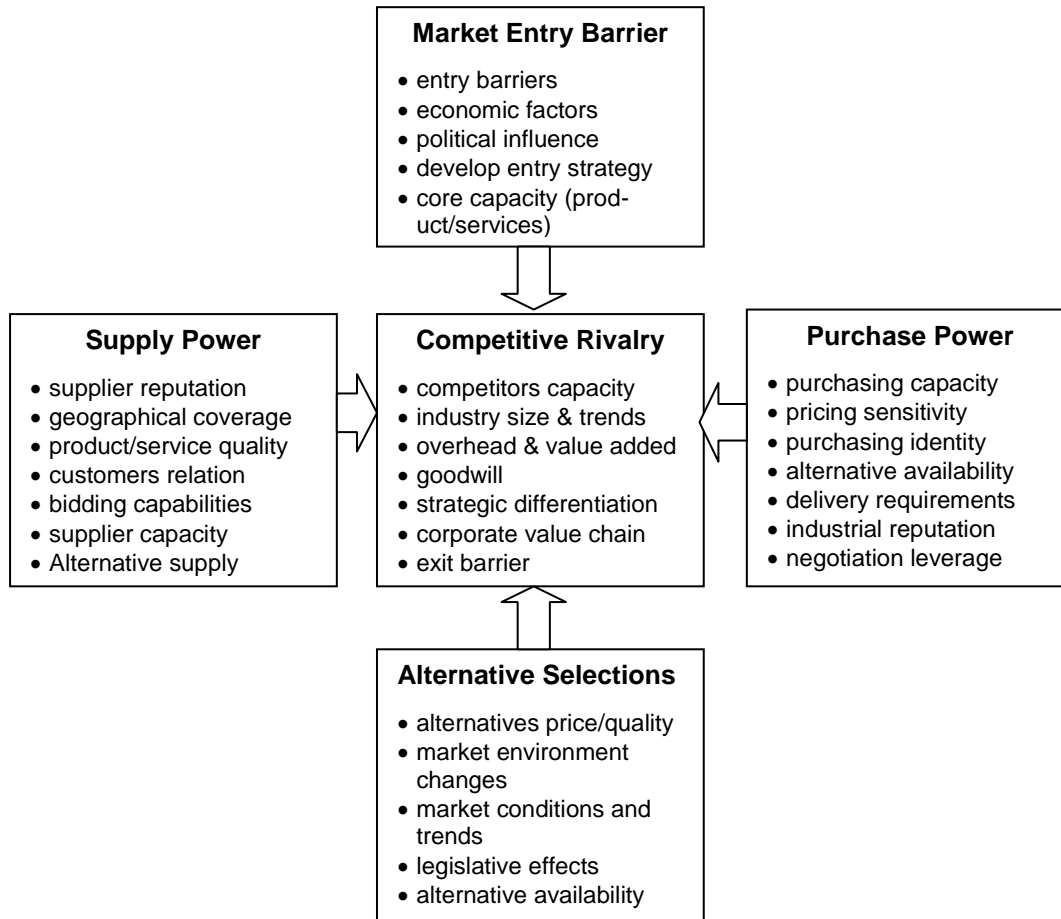
Overall Satisfaction Score by Area of Investigation	
Area of Investigation	Overall Satisfaction Score
Supervision	3.63
My Job	3.61
Management & Leadership	3.57
Working Environment & Climate	3.47
Corporate Culture	3.40
Assignment outside Hong Kong	3.27
Staff Recognition & Benefits	3.27
Communication	3.18
<i>Total</i>	<i>3.45</i>

Overall Satisfaction Score by Work Unit		
Work Unit	Total no. of questionnaire returned	Overall Satisfaction Score
Group	89	3.58
Overseas	98	3.48
Construction	932	3.43
Not Specified	45	-
<i>Total</i>	<i>1,164</i>	<i>3.45</i>

Appendix M

Porter's Five Forces of Competitive Position

Porter (1980, 1985, 1990)



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