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Making Redevelopment Viable - Reduction of Risks to Developers by Urban Renewal Authority in Hong Kong

- 1 volume

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BA (Hons.) and BPl (Postgraduate)

Submitted in fulfillment of the requirements for the Degree of Doctor of Philosophy

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Deposition to the Library

In May 2012

SYNOPSIS OF THESIS

The research presents the findings on developers' views of the major risk factors, risks pricing and risks management on redevelopment. Developers bear and manage a lot of risks. Up to date, academic research has focused primarily on the normative or 'should be' aspect of developers' decisions. This study attempts to fill in the gap unravelling the behavioural aspects of their decisions that truly reflect developers' actions in the current market conditions in practice. This research makes use of research instruments such as questionnaires, interviews and focus groups, prior to the development of conjoint analysis to delve deeper into developers' trade-offs of risk factors.

Findings of the research with particular reference to the context of Hong Kong, a high density built environment, suggest profits and the uncertainty of obtaining the profits are the main factors. Planning procedures is also an important risk noting the recent amendments to the Town Planning Ordinance in Hong Kong allowing wider public participation which in turn increase developers' risks. State action through the quango, the Urban Renewal Authority (URA), is not a concern to developers as they prefer and can redevelop on their own without being tied up by the bureaucracy associated with partnering with URA. Other factors such as the macroeconomic and market conditions, lease aspect, land assembly, public engagement and relation with stakeholders are not significant.

The findings of the present research add to the current knowledge and understanding of how best developers should manage risks in redevelopment. As a result of such awareness and insight, it is hoped that developers would be better able to design and implement more financially viable and better redevelopment schemes. This will in the long term facilitate the pace of redevelopment in Hong Kong; and provide insights into redevelopment elsewhere, especially in high density built environments worldwide, such as New York.

The Thesis is dedicated to my dear mother and father, my Saviour Jesus Christ, those who love me and those who suffer.

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AUTHOR'S DECLARATION

I declare that, except where explicit reference is made to the contribution of others, that this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.

Signature _____

Printed name LEE Mei Fun Rowena

Chapter 1: Overview of the Study

1.1 Background to the Research

1.1.1 Relevance of and interest in topic

At the time of writing this introduction, one of Hong Kong's 5-storey dilapidated terrace buildings fell to rubble with 4 people confirmed dead. This is the most disheartening and serious incident recently caused by old buildings in urban Hong Kong. The physically aging of buildings in Hong Kong has been a particular concern of mine since I started my career as a town planner in a redevelopment agency.

In Hong Kong, most people live in apartments of high-rise blocks. My parents' apartment, their friends' and properties of the majority of property owners in Hong Kong, are now aging very fast. This incited me to think of ways that can prolong the lifetime of such properties and protect their value. I also started to ponder whether the Chinese saying that, unlike currency, land and properties are wealth that could be passed onto generations is true or not. I still hold the belief that properties, if provided with enough resources to maintain or redevelop the whole apartment block, may be a sustainable kind of wealth given that land is valuable if with good location. Nonetheless, property developers who undertake development or redevelopment in the speculative market are seeking a return that may mean some properties are left to decay.

Redevelopment may need to be undertaken by strata-title owners if developers are not interested. This is not only to protect the wealth of individuals but that the city cannot afford such wastage of resources. How to make redevelopment schemes viable for developers will shed light for apartment owners when they themselves act as developers or engage developers to redevelop their estates. Even if they were to sell out as owners to developers, they need to know how much their apartment worth and the costs of redevelopment.

It is intended that this research will give some systematic insights to developers as to how they and others engaged in the development process, including buyers and owners, perceive and approach risks and the relative risk-management measures when undertaking redevelopment.

The research findings will therefore add to the current knowledge and understanding of how developers should best manage risks in redevelopment. As a result of such awareness and insight, developers may be better placed to design and implement more financially viable and better redevelopment schemes. This will, in the long term, facilitate the pace of redevelopment of the vast number of aging buildings in Hong Kong; providing insights to redevelopment elsewhere, especially in other high density built environment.

1.1.2 Focus of research

The term ‘risk’ has been widely used in financial and business aspects of property research, but is not generally well researched or even understood in property development or redevelopment.

Property development involves large sums of money and a long timeframe. It also requires thorough understanding of the economy, political acumen, strong sense of what constitutes good timing, and careful but fast response to opportunities. Enormous risks are therefore entailed at each stage of the development process. A wrong judgment will be costly. Worldwide, some major development firms have gone bankrupt due to one or two wrong moves.

Although an understanding of risks of redevelopment is important, risks have been widely approached primarily from a normative or ‘should be’ aspect of developers’ decisions. This study attempts to unravel the behavioural aspect of their decisions that coherently reflect developers’ actions and market conditions in practice.

The academic research will shed more light on the major risk factors and relative strength of the factors in redevelopment as well as developers’ risks management measures when seen in the context of Hong Kong.

1.2 Aims and Objectives

The main aim of this research is to understand the risks of redevelopment in Hong Kong, in particular their impact on developers and whether by reducing developers’ risk, more redevelopment schemes would be made financially viable. The research also aims to

understand and improve any current action of the official body responsible for redevelopment and regeneration in Hong Kong, i.e. the Urban Renewal Authority (URA), so as to minimise risks for developers and any new initiatives that the URA can take to reduce risk for developers and so accelerate the pace of redevelopment in Hong Kong.

The research objectives are therefore to:

- (a) to analyse factors affecting developers' choice of redevelopment projects in Hong Kong (HK);
- (b) to analyse the relative importance of these factors in affecting HK developers' perception of risk and choice of redevelopment projects;
- (c) to evaluate four factors, namely the impact of planning, the actions of the URA, expected profits, and uncertainty on redevelopment decisions of HK developers;
- (d) to analyse the implications for policy direction of reducing the risk for developers in order to make redevelopment schemes in HK more viable.

1.3 Organisation of the Thesis

This thesis comprises three sections. Section 1 includes Chapters 1 to 5 and provides background information on the whole of the research, including the theoretical framework and the literature review that underpins the study. The second section comprises Chapter 6, and outlines the research design and the methodological considerations necessitated by the study. The final section, which covers Chapters 7 to 10, presents the general and specific findings from both the quantitative and the qualitative dimensions of the study; the researcher's own critique on the strengths, weaknesses, and limitations of the study; and the conclusions, contributions, implications and recommendations emanating from the research. The contents of each chapter are now briefly set out.

Section I – Context of the Study

Chapter 1 – Overview of the Study

This chapter contains the background to the research with an emphasis on the reason for the choice of topic – property risks (especially in redevelopment), and what the research is intended to shed light on. It is followed by the layout of how the whole thesis is presented.

Chapter 2 – Hong Kong as a case study : The development process, developers, Urban Renewal Authority

In this chapter, the political, economic and social context of Hong Kong, which is the case study of this research, is discussed. The real estate sector and the involvement of developers in redevelopment in Hong Kong are examined. The Government process affecting redevelopment by developers is then discussed in detail. Finally, the chapter discusses the evolution of redevelopment in Hong Kong as well as that of the URA and Urban Renewal Strategy Review in Hong Kong.

Chapter 3 – Risks of Redevelopment

This chapter presents the major risks of redevelopment in the linear development process that has been adopted in this research. It first discusses consumers' preference based on the concept of marginal utility of a commodity and how these affect developers' site bids. After that, the relationship between the property market and redevelopment is discussed to provide a broader explanation for context of developers' decisions – that of the macroeconomic and market conditions as well as the interaction with consumer preferences. To complete the picture, the development cycle is discussed. A brief discussion is also given to the typology of actors in the development process, including different types of developers. The major risks of redevelopment are then outlined and the developers' perceptions of risks are examined.

Chapter 4 – Risk Pricing

This chapter contains a review of the neo-classical approach to understanding the property market. It starts with a discussion of four different approaches to understanding markets. Then, the developers' attitude towards pricing risks is discussed. The ensuing section

unravels the limitations of the neo-classical approach and introduces the behavioural approach to understanding developers' decisions. In particular, it explores their perception of risks and understand how risks affects their decisions, the resort to heuristics, contacts and information in formulating their analysis of the appraisals and pricing strategy. The last section explores the decision-making in the firm and organisational context.

Chapter 5 – Management of Risks

In this chapter, the alternative view of the market, in particular, institutional economics and neo-institutional economics (NIE), including the transaction costs theory, will be discussed to complete an understanding of the land development process. The second section will examine the risks management measures of developers and the Hong Kong Government in a redevelopment context based on the NIE's approach. A case study of the Urban Renewal Authority in Hong Kong will evaluate its strengths and weaknesses.

Section II – Methodology

Chapter 6 – Methodological Issues

This chapter provides the rationale for using the qualitative approach as a supporting tool to design the quantitative analysis – i.e. the conjoint analysis. The preliminary procedures, the research design, and the methods for the data analysis, which constitute all the processes prior to, during, and after the data collection are highlighted. The chapter also discusses the ethical considerations in undertaking this research. The methodology used involves questionnaires, interviews and focus groups, prior to the development of conjoint analysis to delve deeper into developers' trade-off of risk factors. Conjoint analysis is a computer-aided experimental psychological method and a form of stated preference analysis. IT demands respondents' trade-off of attributes and reveals the preference strength. The main effects, interaction effects and results from the simulation of the main factors are estimated. Logit regression is employed to analyse the results and empirically derive a redevelopment choice model.

Section III – Results of the Study

Chapter 7 – Analysis and Discussion of the Focus Group and Interviews with Developers

In this chapter, the findings generated from the qualitative aspect of the study are discussed in relation to the existing literature and other research in this field. The qualitative part is intended to build up the design for the conjoint analysis which is a quantitative behavioural study.

Chapter 8 – Analysis and Discussion of the Conjoint Analysis

This chapter focuses upon the findings and analysis of the various major factors identified by developers. It looks at how simulation of the different major factors unravels the trade-offs between the different major factors as well as their magnitude.

Chapter 9 – Conclusions and Recommendations

In this final chapter of the thesis, the research aims and the summary of the main findings are reiterated. The contributions of this study are also suggested whilst the implications of the results of the study as well as some suggestions for future research and intervention are emphasised. In conclusion, the significance of this thesis is recapitulated followed by the researcher's final note.

Chapter 2: Context of the research – Hong Kong as a case study: The development process, developers, Urban Renewal Authority

2.1 Introduction

This chapter aims at understanding the context of Hong Kong. The topics covered are:

- (a) the political, economic and social context of Hong Kong in general;
- (b) the real estate sector and the involvement of developers in redevelopment in Hong Kong;
- (c) the Government process involved in the redevelopment by developers;
- (d) the historical and current perspectives seeking redevelopment in Hong Kong; and
- (e) the evolution of the Urban Renewal Authority and Urban Renewal Strategy in Hong Kong.

2.2 Hong Kong – Background

Hong Kong is a small city strategically located at the southern gateway of China. With a hilly terrain, less than 25% of the land is developed whilst about 40% is conserved as country parks and nature reserves. The rest comprises greenbelts, conservation areas and agricultural land. The city is divided into the urban Hong Kong Island in the south, the rural New Territories in the north and the urban Kowloon Peninsula in between the two, as well as 262 other outlying islands (Table 2.1 and Figure 2.2).

Total: 1,104km²

Urban Hong Kong Island and Kowloon Peninsula: about 128km²

New Territories (adjoining the border with China): 748km²

Outlying islands 228km².

Table 2.1 Area of Hong Kong



Figure 2.2 Map of Hong Kong (from the Survey and Mapping Office, Lands Department)

A route map of the Mass Transit Railway (MTR) is reproduced in Figure 2.3 below for ease of reference to places in this thesis.



Figure 2.3 Route map from www.MTR.com.hk to show the different areas in HK

To eradicate squatter problems in the urban areas, the New Town Programme commenced in 1972 and developed new settlements in Sha Tin, Fanling/Sheung Shui, Tuen Mun and Tai Po in the New Territories. Despite the decentralization policy, about 95% of the population live and work in less than 20% of the land.

2.2.1 Demographic and Political Structure

Figure 2.4 below summarizes the demographic structure of Hong Kong as at 2008:

Population	6.98 million
Hong Kong Island and Kowloon	3.34 million (48% of total)
Public Rental Housing	2.0 million people
Owner-occupiers	2.28 million people (52%)
Age Structure	0-14 years: 12.2% (male 450,833/female 411,997)
	15-64 years: 74.6% (male 2,551,256/female 2,713,532)
	65 years and over: 13.1% (male 434,090/female 493,363) (2009 est.)
Median Age	total: 42.3 years
	male: 41.9 years
	female: 42.6 years (2009 est.)
Population Growth Rate	0.504% per annum (2009 est.)
Area	1,104.32 square km
Density	6,460 people per square km
	51,600 people per square km at Kwun Tong (the most densely populated district)

Figure 2.4 Hong Kong Facts – Demographic and Geographic (Hong Kong Fact Sheet (2009) and CIA World Fact Book (2009))

Hong Kong was a British Colony from 1842 to 1997 but the People's Republic of China resumed its sovereignty over the entire Hong Kong, including New Territories and the Outlying Islands, on 1 July 1997. Hong Kong is a Special Administrative Region (HKSAR) of the PRC following the 'One country, Two systems' principle and is governed by the Basic Law, which stipulates that Hong Kong remains within a common law system. It ensures the rights and freedoms of the citizens and the political, legal, economic and social systems in Hong Kong remain at the status quo for 50 years from 1997.

Ng (2002) commented that ‘the mode of governance in the Hong Kong SAR can be described as ‘governance by government’. The Government...has adopted a ‘minimum intervention with maximum support’ policy’ (p. 140).

The Head of the Government is the Chief Executive. The judicial, executive (represented by the Chief Executive in Council) and legislative (represented by the Legislative Council) powers in Hong Kong are independent of each other to ensure the impartial rule of law, the smooth administration of the Government and the proper enactment of legislation. Details are provided in Figure 2.5.

Executive Branch
Chief of State: President of China HU Jintao (since 15 March 2003)
Head of HK Government: Chief Executive Donald TSANG Yam-kuen (since 24 June 2005)
Cabinet: Executive Council or ExCo consists of 15 official members and 14 non-official members
Elections: Chief Executive elected for five-year term by 800-member electoral committee; last held on 25 March 2007 (next to be held in 2012)
Election results: Donald TSANG elected chief executive receiving 84.1% of the vote of the election committee; Alan LEONG Ka-kit received 15.9%.
Legislative Branch
Legislative Council or LegCo (60 seats; 30 seats indirectly elected by functional constituencies, 30 elected by popular vote; members serve four-year terms)
Elections: last held 7 September 2008 (next to be held in September 2012)
Election results: percent of vote by party - pro-democracy 57%; pro-Beijing 40%, independent 3%; seats by parties - (pro-Beijing 35) DAB 13, Liberal Party 7, FTU 1, others 14; (pro-democracy 23) Democratic Party 8, Civic Party 5, CTU 3, League of Social Democrats 3, ADPL 2, The Frontier 1, NWSC 1; others 11; independents and non-voting LegCo president 2.
Judicial Branch
Court of Final Appeal in the Hong Kong Special Administrative Region
(from CIA World Fact Book (2009))

Figure 2.5 Political Structure in Hong Kong

2.2.2 Economic Performance

Hong Kong is now a world class financial, trading and business centre, hosting the second largest stock market in Asia and large numbers of regional headquarters of foreign companies.

Employment (Total)	3.54 million
Financing, insurance, real estate and business services	588,000 (17% of total employment)
Unemployment rate	3.6%
GDP Growth Rate	\$215.6 billion (2008 est.)
Inflation Rate (Consumer Prices)	2.4% (2008 est.)
	\$43,700 (2008 estimated)
	4.3% (2008 estimated) Hong Kong dollars (HKD) per US dollar - 7.751 (2008)
Service Industries	Over 90% of the GDP in Hong Kong
Economic Growth	Year-on-year rate of change in GDP (in chained (2006) dollars) 2.5%@ in 2008

Figure 2.6 Facts about Economic Performance of Hong Kong - Economic (Hong Kong Fact Sheet (2009))

The strong economic performance has been the result of Hong Kong's strategic location in China whilst adopting an open, free trade economy, upholding the principles of transparency and certainty in the rule of law along with a low taxation regime.

‘The mainland has long been Hong Kong's largest trading partner, accounting for nearly 49% of Hong Kong's export trade by value in 2008. As a result of China's easing of travel restrictions, the number of mainland tourists to the territory has surged from 4.5 million in 2001 to 16.9 million in 2008, when they outnumbered visitors from all other countries combined. Hong Kong has also established itself as the premier stock market for Chinese firms seeking to list abroad. More than one-third of the firms listed on the Hong Kong Stock Exchange are now mainland Chinese companies, and they account for 60% of the Exchange's market capitalization.’

(from CIA World Fact Book (2009))

Figure 2.7 China and Hong Kong

Despite its claim of a largely laissez-faire policy allowing the market mechanism to work fully, the Government intervenes in the property and housing market. Later sections will discuss the Government's intervention in the property sector.

2.2.3 Housing and Home Ownership

The Government spent about 6.3% of its total public expenditure on housing in 2005/06. Public rental housing is provided for low income groups through the Hong Kong Housing Authority (HKHA) while subsidized home ownership flats at discounted prices are provided to middle income groups through both the HKHA and the Hong Kong Housing Society (HKHS).

Of its 2.28 million households, about 52.7% are owner-occupiers and the majority (about 51%) are private residences.

2.3 Real Estate Development Sector in Hong Kong

Hong Kong is one of the world's most dynamic real estate markets (Newell et al., 2007)). It is one of the top 20 largest real estate market in the world (Packard, 2010)). The real estate and construction sector has a substantial influence on the general economy of Hong Kong. The economic activities related to development, which include the 'Construction', 'Real Estate' and 'Ownership of Premises', took up about 27.6% of the GDP in 1980; the proportion of GDP went up to 26.8% in 1997 and fell again in subsequent years. It is now at 17.7% (year 2006) (Census and Statistics Department (2006) and Hong Kong Annual Reports 2007). In 2007, the receipts from land premia were about HK\$16.9 billion¹ i.e. about 6% of the whole of the HKSAR Government's estimated revenue (FS Budget (2009-10)).

Staley (1992) commented that

“the Hong Kong property market is the focal point of the territory's ... growth, accounting for 45 percent of the capitalization in the Hong Kong stock market, 60 percent of Hong Kong's investment expenditures, and almost 40 percent of bank lending. Property markets have contributed 40 percent of total government revenues during the

¹The land premium estimation is HK\$26.2 billion lower than the original estimate of HK\$43.1 billion, a decrease of 73 per cent over 2007-08.

1980s as well. As Hong Kong's economy develops into a global financial and services hub, smoothly functioning commercial and residential property markets will be pivotal.”

Hong Kong is a densely populated city with a limited supply of land for development. However, demand has been growing fast, especially in the early 1980s when the economy was booming. Recently, large numbers of people from mainland China have bought property in Hong Kong and have bid up the property prices, especially for the luxury sector.

Poon (1998, p. 2) pointed out that ‘the Hong Kong real estate market comprises residential, industrial, office and retail sub-markets’. Prices of all properties, including private residential, office space and shop space, were at their peak in 1997 and then turned sour after the Asian financial turmoil in 1998. This was not the first time Hong Kong experienced a property crash but this has been the first since China took over the rule of Hong Kong and the Hong Kong SAR Government took over leadership. The Government proposed an annual supply of 85,000 flats. This was initiated at a time when the Asian Financial Turmoil hit in 1998. This led to a sharp downturn in the property market and the uncertainty to the development industry and the wider public on the capacity of the market to absorb the demand. The market was at its lowest point during the SARS epidemic² in 2003. After the Territory recovered from the SARS epidemic, with China’s policy to allow tourists from different provinces to visit Hong Kong and inject capital from mainland China to invest in Hong Kong, coupled with a low interest rate environment have brought an upward movement in the property market again.

According to Government statistics, payments on housing, including rent or mortgage payments, took up 31% of household expenditure in 2004/05 (Hong Kong Annual Reports 2007). Housing mortgages took up about 39.3% of total GDP in 2009 (Hong Kong Monetary Authority website). In 1997, it took about 6.5 years for the average household saving about a third of its income to accumulate enough money for the down payment of 30% of the mortgage deposit needed for a 430ft² flat (Loh 1997). Added to these high housing costs, Ho (2000, p. 138) commented that ‘Hong Kong’s history has been heavily

² Severe acute respiratory syndrome (SARS) which was an epidemic that spread around the world between the November 2002 and July 2003. It led to 8,096 known infected cases and 12 confirmed human deaths worldwide as listed in the World Health Organisation. This epidemic has led to a severe and sudden downturn in the stock and asset markets, including the property market.

characterized by intense speculation in residential property in the 1990s, especially in the mass residential property market sector³.

There are new (primary market) and second-hand (secondary market) flats on sale in the market. Property redevelopment brings in a continuous stream of new flats to supply the market. As in any part of the world, luxury, middle class and ordinary working class residences sell at different prices depending on the location, the quality of the materials used in construction and the brand name of the developers. For those in luxurious locations, built with high quality construction materials and by a developer who is well known for producing high quality work, such flats will sell for a very high price. In contrast, the majority of middle class family flats would be built in densely-populated urban areas and along major transport nodes such as along the Mass Transit Railway (similar to the underground in London) and with ordinary materials and sell at reasonable prices to attract the large proportion of middle class households in Hong Kong. The most sought after middle class private housing is in the major housing estates with up to about 20 housing blocks in a single development and supplied with recreational facilities and open space.

Most of the pre-war residential buildings are less than six storeys high and without sanitary facilities. They, together with the early post-war residential buildings less than 12 storeys high, are mostly located in the urban core of Hong Kong Island and Kowloon Peninsula. These residential buildings, the flatted factories and industrial buildings in the periphery of the urban core, such as in Kwun Tong, Kowloon Bay and San Po Kong in eastern part of Kowloon, Tsuen Wan, Sham Shui Po and Cheung Sha Wan in western part of Kowloon (please refer to Plan 2.3 above) have the highest potential for redevelopment. Nonetheless, there are a lot of constraints forbidding or delaying redevelopment by developers who may therefore find these projects risky. These constraints include the strata-title⁴ ownership pattern of these buildings, the planning and land control mechanism, which make reference

³ In Hong Kong, the private residential property market is officially classified into two categories: the mass residential property sector, in which the maximum size of a dwelling is limited to 99.9 square metres; and the luxury residential sector, with a size of 100 square metres or larger (Rating and Valuation Department, HKSARG).

⁴Under a Strata-titles system, purchasers of a housing unit in a community where there are certain communal properties have acquired a bundle of rights at the time they obtain full title to their property. These rights include the rights over their own unit, the rights over their share of the common areas and the rights to membership of a statutory governing body charged with the duty to manage the community' (Li (2004, p. 125)).

to the infrastructure provision, as well as the wider demand and supply factors in the property market.

Commercial properties, including offices and retail properties are sought after by investors and institutions who find the economic health of the city and its proximity to China a good investment. Prime office space (also called Grade A offices) are mostly found in Central; the Central Business District (CBD) of Hong Kong. Secondary office nodes are along the MTR line close to Central district and the Harbour (please refer to Plan 2.3 above for the location). Due to the concentration of the population, retail floor space also yields very high returns.

Industrial floor space in urban areas are mainly in the form of flatted factories. They were built before the 1980s but a large proportion of them have been left idle ever since the removal of most industrial activities to mainland China and other parts of Asia. Industrial/office (I/O) buildings mixing office uses with some ancillary storage and warehouse uses on the same floor have since appeared. This is in response to the need for factories which have moved elsewhere to maintain headquarters in Hong Kong for handling documents to facilitate exports and imports.

Developers

Property developers in Hong Kong are large and profitable by international standards (Chiang (2001)). In 2000, Hong Kong had the largest and most profitable property firm in the world (Business Week, 2000) – Cheung Kong Holdings. Big developers emerged from the 1960s when, as Poon et al (Poon (1998), p. 4) pointed out

‘the Government ... helped the property developers to increase supply, ... allow developers to sell individual units of the tenement buildings rather than the whole block....Also, ...purchasers could pay by instalments rather than lump sum payment. These measures not only provided homes for owner-occupiers, but also created chances for speculators to participate in real estate.’

Poon et al. (1998) also stated that later in the 1970s,

‘Developers realized that they could pool money from issuing shares through the stock market to participate in real estate development.’

Smart and Lam ((Smart 2009)Smart (2009) p. 197) even termed it the ‘government/developers nexus’ in which ‘the Government look out for the interests of the property developers, given the centrality of real estate to Hong Kong’s political economy and to the Government’s revenues’.

From the data of the Hong Kong Stock Exchange (HKSE), up to October 2009, about 13 companies are real estate companies in the top 50 listed in the HKSE with the largest market capitalization rate (**Appendix I**).

RE Companies	Market Cap (US\$)	HKSX Rank	RE Invest	RE Dev	Office	Res'l	Ind'l	Res	Mainland China
	(billion)								
Hutchison Whampoa ^a	38.0	3 rd	✓	✓	✓	✓	X	✓	✓
Sung Hung Kai	22.1	6 th	✓	✓	✓	✓	✓	✓	✓
Cheung Kong	21.6	7 th	✓	✓	✓	✓	✓	✓	✓
Swire Pacific ^a	11.7	12 th	✓	X	✓	✓	X	✓	✓
Henderson Land	8.7	18 th	✓	✓	✓	✓	✓	✓	✓
Wharf	8.1	20 th	✓	✓	✓	✓	X	✓	✓
Hong Kong Land ^b	5.7	26 th	✓	X	✓	✓	X	✓	X
Hang Lung	5.5	26 th	✓	✓	✓	✓	X	✓	✓
Sino Land	3.8	35 th	✓	✓	✓	✓	✓	✓	X
New World	3.5	39 th	✓	✓	✓	✓	X	✓	✓
Hysan	2.1	57 th	✓	X	✓	✓	X	✓	X
Great Eagle	1.4	78 th	✓	X	✓	✓	✓	✓	✓

Notes: The source of the data is: www.hkex.com.hk. US\$1=HK\$7.79
^a Consolidated enterprises with significant real estate-related activities.
^b Listed on Singapore stock market; equivalent ranking on Hong Kong Stock Exchange is given.

Figure 2.8 Profile of Hong Kong Real Estate Companies: December 2004 (adopted from Newell et al. (2007) – Exhibit 3)

There is a typology of developers. Woodford and Clauretie (1992) classified two types of developers according to their roles : those holding onto their development for renting out and those who sell their completed developments. Newell et al (2004, p. 516) commented on developers’ strategies that the ‘overall strategies ranged from conservative to aggressive. In Hong Kong, there are two major types each with a different risk profile.’

The first type of property development companies in HK are generally trader-developers, ‘typically characterized by property acquisition and trading’ (Newell et al, 2004, p. 516) and they usually develop high-rise residential or commercial blocks and sell the strata-titles for a profit. Issac (2003) also described these companies as buying properties and land, adding value to forward sell these land and properties. According to Ho (2002), a typical big development company would bring between 1,000 and 2,000 residential or commercial (office) units to the market per annum. This usually means selling about one development project a year. The cost of developing projects of this scale can easily exceed HK\$2-3 billion. To sustain their business, developers have to work towards a continuous supply of units to the market through securing an uninterrupted supply of land. To facilitate such a scale of development, syndicated loans often exceeding HK\$1-3 billion are involved and therefore developers need a very good relationship with banks.

The second type is property investment companies. They own the development for investment purposes and receive a continuous stream of rental income. Swire Pacific and Hysan are renowned property investment companies. Please refer to Figure 2.8 above. They are less complex and their typical business model is to own, lease out and manage a portfolio of properties. Their income is mostly recurrent and their risks lower, so that they can therefore carry relatively more debt. The lease terms in HK are generally two to three years, which means a need for more frequent rent reviews and an active commercial rental market (Ho (2002). Newell et al. (2004, p. 516) advised that ‘recent years have also seen a trend from property development activities to more property investment activities amongst property companies’. Besides, with the globalization of world economy, most major Hong Kong developers commit a larger proportion of their businesses to China, which is a bigger market. As a result, they are not so reliant on land supply in Hong Kong.

Developers in Hong Kong contributed tremendously to redevelopment (Ng (2005), p. 446). They have been creative in putting forward a holistic approach and organic redevelopment, i.e. by gradual transformation of an area such as Star Street in Wanchai and the SOHO (Hong Kong) in Central.

For Star Street in Wanchai, the developer, Swire Properties, bought the previous barracks site in Admiralty and developed it into Pacific Place. The company then began to acquire gradually the low-rise flats in Star Street, which are located next to Admiralty, over a prolonged period. The intention was to build ‘an empire’ of high class office and

residential flats stretching from Admiralty to Wanchai in the east. Shortly before 1997, the Starcrest, a luxury residential complex comprising two tower blocks was completed. Recently in 2007-2008, Third Pacific Place along Queen's Road East adjoining the Starcrest to the north was completed to accommodate offices and fine restaurants.

For SOHO, around the same time that the Mid-Levels Escalator was built in 1993 to serve the Mid-Levels and Central Districts, a few westerners started to move into the area, taking up commercial premises and renting flats. The area has evolved over the years and now comprises a mix of commercial properties on the lower floors and residential properties on the upper floors in the district. A number of newly refurbished low-rise flats and some new-build tower blocks were also completed.

Location is still a decisive factor for successful redevelopment by property development companies. The compact territorial extent of Hong Kong means there are always strong development pressures (Poon (1998), p.17).

Apart from location, development cost is another major consideration. Land prices in Hong Kong are very high and "constituted 70 to 80 percent of the sales value of the completed flats" (Yiu (2004)) or 50 to 70 percent of the total project development costs (Ho (2002)). Developers have to be careful in acquiring land and financing the acquisition costs for development. Due to the high price of land, Hong Kong is a high-density city with most of the buildings in Hong Kong being skyscrapers to maximize the usage of each unit of land. Chiang et al (2001, p. 236) remarked that,

'property development and investment are capital intensive ...particularly so in Hong Kong. Both land and construction costs are among the highest in the world'.

The capital inputs for land, financing and construction costs are extremely high and the risk is very high due to the large overhead needed that can only be redeemed with or without a profit at least two to three years later – the general construction time for a building in Hong Kong. The construction price is also high due to the need to develop skyscrapers with a limited amount of room to manoeuvre on site.

Chiang et al (2001, p. 236) commented that 'the capital requirement is a formidable economic barrier to entry to the property market (in Hong Kong)'. The few developers

have mostly benefited after riding above the storm in previous downturns and picking up assets from less fortunate counterparts. The Consumer Council of Hong Kong undertook research in 1991 to 1993 and found out that the top three dominant developers in the Hong Kong housing market (Cheung Kong, Sun Hung Kai and Henderson Land) provided between 37% and 55% of the total annual supply in the housing market. In fact, one developer had a market share of over 25% of the supply of residential floor space in the four years under study.

The high concentration of the property development industry reduces the enormous risk associated with capital-intensive high-rise high density buildings. It allows economies of scale so that the resource-rich and powerful developers finance the development from within the company and from major banks' lending at lower costs.

According to the Hong Kong Stock Exchange, about 150 real estate companies are publicly listed in Hong Kong. However, some of them may be developers with businesses concentrated in China rather than Hong Kong. For the Hang Seng Index (which is similar to the FTSE in London and the Dow Jones in New York), of the 33 constituent shares, 13 are property development or investment companies in Hong Kong (see list in Appendix I for 12 of them). Most of these dominant developers have diversified into conglomerates in different sectors.

When the list of developers in Figure 2.8 is examined more closely, it is apparent that the top five developers are Cheung Kong (Holdings) Limited with its subsidiary Hutchison Whampoa, both committed to property development, Henderson Land Development Company Limited, Sun Hung Kai Properties, Swire Properties and Hong Kong Land. All of them hold a large land bank either in the rural New Territories or property holdings in the urban areas. For instance, Sun Hung Kai Properties has a large landholding in Yuen Long in the north-west whilst Cheung Kong Holdings also possesses a large stretch of land in the north-west in Tin Shui Wai. Henderson Land is renowned for its acquisition of older residential buildings in urban Hong Kong, such as in To Kwa Wan.

The three largest property developers own approximately 60 million ft² of potential floor space in Hong Kong – enough to accommodate over 1 million people (Green, 1997). Without the capital startup and the difficulty in acquiring land, the establishment of new and/or small developers has been deterred. Tse (1998) noted no direct correlation between

land supply and housing prices and Hui et al (2006) attributed this to the developers absorbing the land supply into their land banks without immediate development.

Most of the major players have diversified into conglomerates involved in different businesses such as property investment, the hotel industry, port development, the telecommunications industry, major supermarkets, infrastructure, finance and public utilities provision such as electricity and gas.

Hui et al (2006) remarked that ‘those developers have some sort of oligopoly powers to set prices, in order to maximise profits’. According to research by the Consumer Council (1996), developers in Hong Kong control the supply of units by alternating their sales, not only of those from one company but also between companies. They also release units in batches, arguing that they are testing the water, but with the real effect of drip feeding supply so as to regulate the market. Statistics indicate that the vacancy rate of developers’ new residential blocks is much higher than the average vacancy rate of the whole of Hong Kong, and the latter figures include the second-hand market as well. That means developers can even curtail the sale of properties till the market is booming and market their property units, as luxury flats, houses or commercial floor space to make higher profits. The Harbourside of the Kowloon Airport Railway line development is a case in point. It is a luxurious residential development comprising three towers and 1,122 flats. The major developer, Hang Lung Properties Limited, has been holding onto the stock and took ten years to release gradually the strata titles of the flats to the market for sale so as to obtain a better price.

2.4 Government approval process and redevelopment in Hong Kong – an overview

Loh (1997, p.1) commented that there is market failure and regulatory failure in the property market in Hong Kong.

‘Market mechanisms are not working in property development in Hong Kong. A few developers have come to dominate the market’.

Liusman (2007)'s research substantiated Loh's argument and put it in the perspective of the redevelopment market. Liusman compiled data from the Government's data and derived the following graphs:

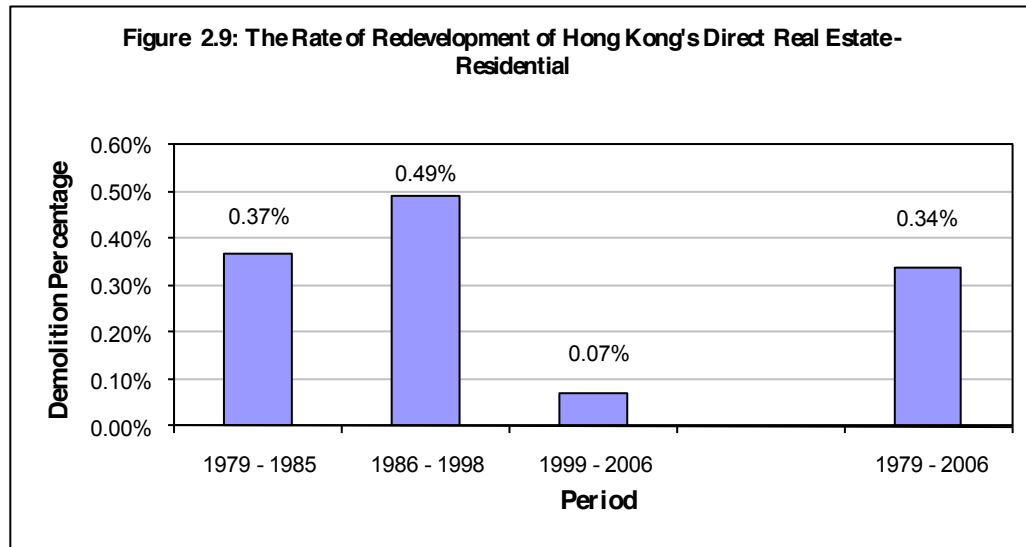


Figure 2.9 The Rate of Redevelopment of Hong Kong's Direct Real Estate – Residential (Source: Hong Kong Property Review, Rating and Valuation Department, 1979-2006 and Liusman's compilation)

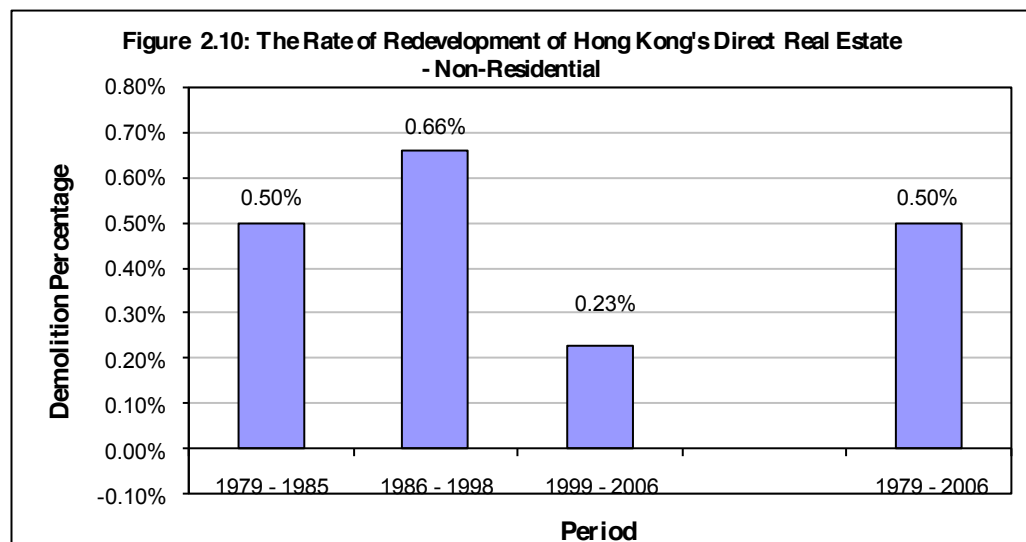


Figure 2.10 The Rate of Redevelopment of Hong Kong's Direct Real Estate – Non-Residential (Source: Hong Kong Property Review, Rating and Valuation Department, 1979-2006 and Liusman's compilation)

The graphs show the rate of redevelopment⁵ and the result indicates that the rate has substantially decreased after 1998. The Planning Department (PlanD 1999) revealed that ‘there has been a consistent decline in the supply of private residential flats through redevelopment in the urban areas since the late 1980s.’ It is apparent that the redevelopment market is not functioning at its full efficiency. The following will first describe the Government approval process for redevelopment and further on will evaluate the main obstacles to accelerating the rate of redevelopment.

The Government’s major intervention in the property development market since 1978 has been summarized by Liusman ((2007), Table 3.1) and adapted below:

Table 2.11 Government’s Major Intervention in the Property Development Market since 1978

Date	Events
19 Dec. 1984	<ul style="list-style-type: none"> - Restriction of new land supplies to 50ha per annum from 1984 to 1997, as stated in Annex III of the Sino-British Agreement. - Set up of the Sino British Land Commission
1991	<p>Town Planning (Amendment) Ordinance</p> <p>The extension of the statutory planning jurisdiction into the non-urban area, the provision of enforcement powers against urban area, the provision of enforcement powers against unauthorized development in DPAs⁶ and the establishment of an independent Appeal Board to deal with appeals against the TPB’s decisions on planning application (Planning Department, 2006)</p>
June 1994	<p>The Government implemented a package of anti-speculative measures to curb speculation in the residential market. These measures impose a 70% ceiling on the residential loan-to-mortgage ratio, a restriction on pre-sales, and early payment of stamp duties. The measures were partly relaxed</p>

⁵ The figure on rate of redevelopment is not directly available in Hong Kong. Liusman made a proxy, by indirectly using the figures of demolition as a percentage of the total stocks.

⁶ DPAs or Development Permission Area Plans are statutory plans prepared for majority of New Territories area provided with planning enforcement power.

	in 1998.
1997	Tung Chee Hwa, the first CE of Hong Kong SAR after Hong Kong was returned to China's rule, pledged to supply 85,000 new flats annually from 1998 onwards to solve the issue of soaring property prices.
22 Jun 1998 - 31 Mar 1999	Land Sales were suspended (but resumed on 1 st April 1999).
1999	The Government imposed a time limit of nine months to process objections to draft statutory plans and submissions to the Executive Council for approval (Planning Department, 2006).
13 Nov 2002 – 31 Dec 2003	Land Sales were suspended (but resumed on 9 th January 2004).
2005	<p>Town Planning (Amendment) Ordinance</p> <p>The main objectives are to streamline the plan-making process and planning approval procedures, enhance the openness and transparency of the planning system, and strengthen planning enforcement control in the rural New Territories (Planning Department, 2006).</p>

Figure 2.12 depicts a simplified redevelopment process in Hong Kong⁷. For the purpose of this research, the researcher's study of redevelopment in Hong Kong is confined to the urban areas, i.e. the ambit of the Urban Renewal Strategy.

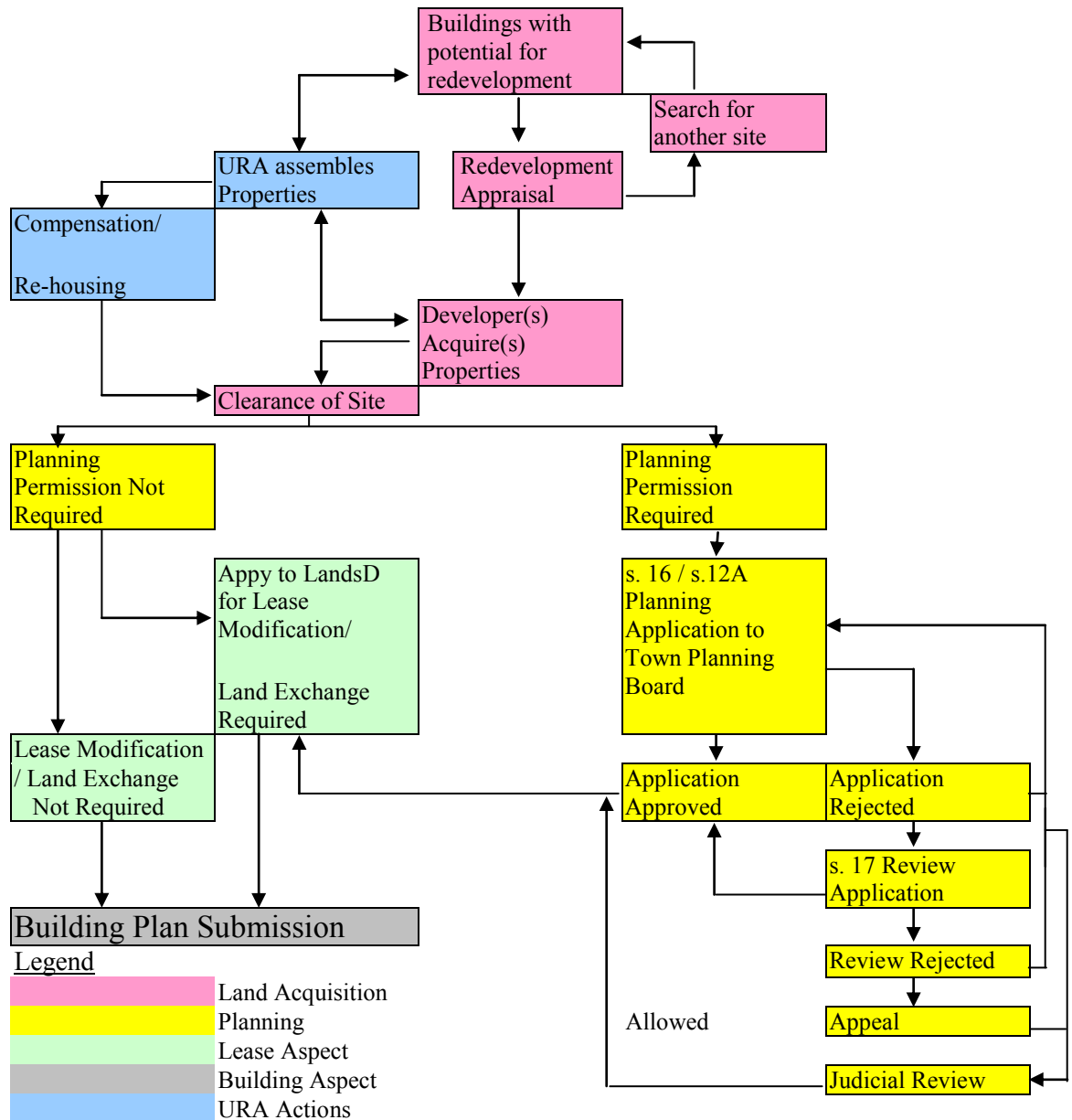


Figure 2.12 Government planning approval required for the Redevelopment Process (Private Sector) in Hong Kong (modified from the Development Process in Chapter 4 of Lai (2000))

⁷ Further explanation will be provided in Appendix II.

2.5 Difficulties in Redevelopment in Hong Kong

The major difficulties or obstacles to redevelopment in Hong Kong are the difficulty of acquiring property, high land premia, recent amendments to the land use planning control, and the overlapping of land, planning and building control.

Aging properties and difficult property acquisition

Land supply in Hong Kong comes from four main streams:

- (a) Government auctions under the Land Application List;
- (b) Tendering of projects along the railways by the Mass Transit Railway Corporation;
- (c) The redevelopment programme of the URA; and
- (d) Lease modifications and land exchanges of private land or tender and private treaty grant of Government land.

All land in Hong Kong, except St. John's Cathedral is owned by the Government. The Government leases land to private developers on a lease term of a certain number of years, generally 50 years after year 1997 until 2047. The developers then sell the development mostly in the form of flats to individual owners and the latter pay an annual rent to the Government set according to the land value.

In urban areas of Hong Kong, new land supply can come from harbour reclamation and release of existing Government land. Such new land supply directly provided by the Government, with clear conditions of sale, is less complicated than redevelopment which involve lease modification. Nonetheless, Government land in urban areas is limited in supply and there are fewer and fewer sites available. As for reclamation, the public are increasingly concerned about the environmental impact of reclamation. Before the handover in 1997, the Court ordered that reclamation along the harbour should be undertaken only for purposes of overriding public interest. Since reclamation became unavailable, most properties in urban areas are constructed by way of redevelopment, as a large part of the urban areas have been fully developed.

HK's property stocks are also aging fast. According to the URA, in 2008, the number of decaying buildings over 30 years old⁸ in the urban area amounted to about 15,000 blocks whilst the number is set to increase by 50% to 22,500 blocks housing 110,000 people in a decade's time⁹. Most of the financially viable redevelopment opportunities have already been undertaken but the less viable ones are left in a dilapidated state without adequate maintenance or hope for redevelopment. These old multi-storey buildings are unsuitable for accommodation and some have become a threat to public safety with falling masonry sometimes hitting passers-by¹⁰.

Rapid economic development has hastened the economic obsolescence of buildings in the urban core. A large number of the buildings were redeveloped even before they reached the end of the buildings' physical lifespan.

Multiple ownership of individual blocks on each piece of land makes negotiation by developers a complex task. Adams et al (2002) commented that a single uncooperative owner in a whole block of flats may hold up the whole acquisition process and delay the pace of redevelopment.

Yeh ((1990), p.374) pointed out the problem of property acquisition in Hong Kong:

‘Urban redevelopment in Hong Kong by [the] Government or private sector is a difficult, time-consuming and resource-demanding task. It is necessary to acquire ... units in a multi-storey building before the building can be demolished and redeveloped. This is complicated by the multiple ownership properties in Hong Kong, in which each unit in a building is owned by a separate owner and lots are owned by groups of individuals or companies... Considerable time and effort have to be spent on lengthy negotiations in order to secure a sufficient number of small lots for assembly into a larger site suitable for the implementation of a redevelopment scheme’.

⁸ Although 30 years for a multi-storey building is not the limit of the building's lifespan, a time comes when substantial building maintenance is required. Besides, those built 30 years ago, i.e. before the 1970s are lacking in sanitary facilities and residents are in poor living conditions.

⁹ According to an unpublished 1992 survey mentioned in Cook and Ng (1998), of the 14,720 buildings surveyed by the Buildings Department, about 1,472 (1%) were in a very dangerous state, 5,299 (36%) were in ‘suspect condition’ and 62% were in ‘reasonable condition’.

¹⁰ There have been more reports of falling masonry causing a threat to the pedestrians in recent years.

High land premia

Loh ((1997), p. 5) pointed out that

‘the land premium often makes up 50% of a project’s total cost and 80% of a project’s capital needs, even with aggressive pre-selling’.

The leases governing the sites generally include some restrictive clauses, such as a low development intensity, e.g. a plot ratio and gross floor area allowed. The developer undertaking redevelopment would usually apply for lease modification with the Lands Department after obtaining consent from the Town Planning Board for a higher development intensity. If the changes involve amalgamation of sites and changes in the site boundary, land exchanges would be triggered. When a developer wants to change the terms of a lease of land, such as its use or development restrictions, lease modifications and land exchanges have to be undertaken and a land premium¹¹ would be levied according to the difference in market value between the old lease and the new lease.

Ng and Cook ((1997), p.5) commented that

‘Government has relied heavily on land sales as a major source of revenue.’

‘Government (has) vested interests in land related developments (Ng (2008), p.169).’

Hui et al (2006) further remarked that this reason led to ‘the premia received [being] kept high’ because ‘a third of ... Government revenue had been derived from land sales, most of such from premia’. Besides, the need to pay a large ‘upfront payment’ after land acquisition before the other part of the development process begins deters many startup and small developers.

¹¹ According to the Lands Department of the Hong Kong SAR, modifications, whether by modification letter or conditions of exchange, shall be granted at premium reflecting the difference between the "before" and "after" land value.

Recent amendments to the land use planning control and Public Engagement

The Government Planning Department draws up zoning plans, designating new development areas. In doing so, it gives direction on where land will be supplied. Through development control, i.e. the planning permission system, the Planning Department advises the TPB and decides on which development or redevelopment will take place in which location.

Hui et al (2006) remarked that

‘the Planning Department has the power to control the density of development, the use of the site and the approval rate of development’.

Indeed, Lai et al ((2004), p. 189) compiled the approval rate for planning applications for all land use zones from 1975 to 2005. The average approval rate was only 68.9% between 1984 and 1997. The highest rate was 91.4% in 1985 whilst the lowest was 49.1% in 1992. This indicated that land use planning control adds to the risks of redevelopment.

Despite the Government’s power, the realization of the zoning proposals is left mainly to the private sector where developers propose development in line with the planning intention of a particular site. Planners do not control nor are provided with the financial resources to implement the uses and planning intention in the statutory plans i.e. the Outline Zoning Plans. The implementation of the Outline Zoning Plans is ‘dependent on the reaction of the land market and resource spending of various Government departments’ (Lai (2000), p. 26).

However, this does not mean that planners support the mere operation of the market mechanism. Lai (2000, p. 24) commented that town planners in Hong Kong ‘are not champions of laissez-faire economics, as far as the land (use) and (building) development market are concerned’. Though Government officials argued that the system allowed both certainty and flexibility in controlling land development (PELB (1996)), many contended that the planning system and policies put forth are rigid. Hui et al (2006) cited the example of the Government’s optimistic projection of a population growth trend but the reality was ‘a chance of a relatively slow rate of land development’ due to the declining birth rates.

‘The Hong Kong people have to pay high prices because of this restrictive planning policy’.

The rigidity of planners may be due to what Lai ((2000), p. 30) commented as the long-held subconscious belief of planners that there is a ‘dichotomy between ‘public interest’ as claimed to be represented by ‘the plan’ or ‘planning’ on the one hand and ‘private interest’ ascribed to ‘the market’ on the other.

Amendment to the Town Planning Ordinance

The Town Planning Ordinance (TPO) sets the legal provision for the statutory plan-making and development control in Hong Kong as well as the institutional framework by setting up the Town Planning Board (TPB). The TPB consists of members appointed by the Government and comprises Government officials from relevant Government departments and well-known members of the public, each for a term of service of two to four years.

A major amendment to the TPO was undertaken in 2005 to widen the scope for public participation. The TPB meetings, except the deliberation part¹² are now open, and the minutes are available to the public. For plan-making, statutory plans will be published for two months for public inspection and the public can make representations within the publication period on the draft plan or on specific amendments to the plans, whichever is the case when the plan is published. The representations will be made available for public comment for three weeks. The representations and comments will be submitted to the TPB for deliberation. Any further amendments will also be made available for publication and representations.

A new provision under section 12A of the TPO allows the public to make applications proposing amendments to an approved or draft plan.

¹² In the past, only members have access to such. Even with the amended TPO, the deliberation by members of all cases is behind closed doors. However, the minutes provide a summary of the deliberations and members who have raised objections or made comments are not named.

Provisions have also been made to allow the public to make comments on planning applications. The TPB must consider a s.16 application within two months. As for a s.17 review and a s.12A application, the TPB should fix a date within 3 months for consideration of the case.

The amended TPO creates risks to the developers by providing wider public participation to the forward planning and development control processes.

Regarding the impact of planning on developers, the Planning Department (2005) summarized the practitioners' views of the amended Town Planning Ordinance as follows:

‘The operation of a more transparent planning system should be properly managed so as to minimize any possible abuse of the system. Otherwise, the smooth running of development activities in Hong Kong will be affected.’

‘With a more open planning system, there is a general concern that the number of representations to draft plans and comments on planning applications would significantly increase, and a large number of adverse representations/comments may be misleading as some may lack substance or even contain ulterior motives. Some consultees consider that there is a need to prevent any possible abuse and suggest that some guidelines should be drawn up on what kind of representations/comments should be made by the public and how the TPB should consider such representations/comments.’

Some queried ‘[w]hether a more open planning process will arouse more objections and therefore prolong the planning period’.

The Real Estate Developers Association also remarked that:

‘The TPB may reject an application simply because it is subject to a number of objections. Some guidelines on how the TPB should consider comments on applications should be devised, and the criteria on who can make comments and what kind of comments can be made. The reasons for objection should also be clearly stated and should have planning justifications. The comments should be relevant to the planning context of the site and not vexatious.’

Talking about the increased planning ambit, Staley (1992) remarked that it is

‘likely to have significant impacts on property markets in Hong Kong. The economic impacts will emerge from two fundamental changes in the way planning is practised in Hong Kong; the changes involve: (1) delays that will result from public participation in the development process, and (2) the breakdown of the contractual nature of development under the leasehold system.’

Lai ((2000), p. 89), however, commented that:

‘the developer’s attitude is ambivalent. While he or she would naturally object to citizen participation that may frustrate, delay or compromise the projects, he or she would welcome better access to Government information and greater representation in the planning process by his or her lobbyists.’

The overlapping of land, planning and building control in Hong Kong.

Lai et al (2004) also argued that there are overlaps in the control on property development between the Planning, Lands and Building Authority.

The REDA, when commenting on the Town Planning Ordinance Review added to this remark stating that:

‘the existing “segmented” submission and approval processes managed by the Lands Department, Buildings Department and PlanD should be streamlined by keeping the procedures and fee charging systems of the three Government departments as simple as possible.’

2.6 Urban Redevelopment in Hong Kong with particular reference to the Urban Renewal Authority

2.6.1 History of Government Intervention

There is a strong British influence over regeneration thinking in Hong Kong. This will be further explored in the ensuing sections. The Government was not originally active in city redevelopment. The only scheme undertaken by the Government was the pilot redevelopment project in Sheung Wan in 1960s. The project took over ten years to complete. Thereafter, the Government engaged only in renewal involving improvement to the environment, traffic circulation and provision of community facilities in the older urban core.

The HK Government is committed to a non-interventionist approach to the property market. Ironically, the Government controls land supply, sets planning restrictions on land use and development parameters, as well as the requirement on the mortgage ratio for financing a flat by private individuals. On redevelopment of dilapidated buildings, the Government has allowed the market to take the lead until the Government realized the failure of the redevelopment market in solving all of the problems.

“By the 1980s, it had become clear that a fresh and imaginative development strategy was urgently needed for the whole of the older urban areas around Victoria Harbour” (Adams and Hastings (2001, p. 1479).

Adams and Hastings (2001, p. 247) pointed out ‘four main institutional weaknesses’ of redevelopment in Hong Kong:

- no effective mechanism to assemble sites in multiple ownership;
- reluctance to re-house existing occupiers;
- absence of a central redevelopment authority; and
- government failure to commit enough staff and resources to urban renewal.

LDC

In 1988, the Land Development Corporation (LDC) was established as the first systematic and focused attempt at urban renewal and redevelopment in Hong Kong (quoted in Lau’s

from URA (2008), p. 41). It is modelled on the LDC in Britain. It was first offered HK\$100 million by the Hong Kong Government as start-up¹³ and required to be self-sustaining. The idea, as Fong argued, is that :

‘the private sector should be the main driving force and that its own intervention should be confined to promoting private sector development in areas where it wished to achieve social and economic goals’ (Fong, 1985, p.289).

For this reason, the LDC worked in partnership with leading private sector developers in the first phase of operations between its inception in 1988 until the early 1990s. Projects undertaken included the commercial/office development in Wing Lok Street and Jubilee Street in Central, Argyle Street and Dundas Street and Sai Yeung Choi Street in Mong Kok and Yunnan Street in Yau Ma Tei. Residential developments were the Ko Nga Court in Western District and Li Chit Garden in Wanchai. Since the early 1990s, the LDC went into the second phase of direct development on its own and accepted owner participation. This was due to the adequate financial backing and the mounting public pressure objecting to joint ventures between a quango and private developers. These projects included several residential towers in Sai Ying Pun and Wanchai, as well as in Hung Hom.

The LDC was at first successful when the property market was booming, securing joint venture partners from developers for its redevelopment projects. However, over 12 years of operation it completed only 16 projects and did not contribute much to tackling urban obsolescence. The LDC set the following joint venture rules for developers:

- pay a deposit at the beginning of a joint venture development;
- shoulder all costs relating to the acquisition of the site and subsequent development costs;
- guarantee that LDC would bear no loss; and
- share with LDC 50% of any profits gained.

(Ng (2002)).

¹³ Though the LDC took a HK\$31 million loan and fully repaid it with interest to the Government.

The constraints faced by the LDC model were later revealed when the economy was in a downturn. The LDC Ordinance required the LDC to operate on prudent commercial principles. However, profitable projects were hard to find after the most viable ones were redeveloped and when the property market was in the doldrums. Besides, the LDC had insufficient re-housing resources to accommodate the tenants of redevelopment projects. Added to that is the lengthy land assembly process due to the statutory requirement for LDC to take “all reasonable steps to acquire properties” voluntarily which resulted in LDC having to conduct protracted negotiations with property owners and acquire a majority of the interest before it could ask for resumption of the remaining properties. Usually, several rounds of offers had to be made to owners and tenants before it could request the Government to resume the remaining interests unable to be acquired.

The protracted land assembly process, the insufficient re-housing resources and the need to engage in commercial principles all brought pressure on the LDC. They added much risk to developers in terms of unexpected interest charges, a prolonged development process, a less than satisfactory relationship with tenants due to insufficient re-housing, a poor public image and lower returns.

After a decade of operation, it was found out that ‘most of the low-rise buildings have already been redeveloped, often in a piecemeal manner without achieving improvements to layouts, transport networks, community facilities and services’ (Planning Environment and Lands Bureau (1996), p.6). Redevelopment opportunities were harder to find as it was difficult to acquire multi-storey buildings ten or more storeys high.

A new legal and institutional framework was set up to take forward urban renewal. To respond to the mounting pressure for containing urban decay, the Urban Renewal Authority Ordinance (URAO) (Chapter 563) was enacted in July 2000. The URAO directed that the Urban Renewal Authority follow the guidelines set out in the Government Urban Renewal Strategy (URS). The first URS was published in November 2001 after wide public consultation. The URS will be reviewed and updated every two to three years. In June 2008, the Government announced a 3-stage and 2-year review of the URS. It looks into, in particular, heritage conservation, community networks and building rehabilitation due to the public attaching greater importance to these areas in recent years.

URS

The URS sets out the planning parameters and financial guidelines for the URA which include the following details.

- (a) the detailed plans of the 225 redevelopment projects;
- (b) the concept plans of the nine target areas;
- (c) a list of the historical buildings to be preserved;
- (d) the priorities of the projects; and
- (e) planning parameters and financial guidelines.

The priorities of the projects, the planning parameters and the financial guidelines are kept confidential due to the sensitive nature of the information.

According to the URS, the key principles of the Government's approach to urban renewal can be summarized as being a people-oriented approach. The principles are related to a fair and reasonable compensation in resumption, re-housing of tenants, bringing benefits to the community at large and allowing those affected by redevelopment projects to express their views.

The main objectives of urban renewal in the URS related to redevelopment are:

- (a) restructuring and re-planning designated target areas;
- (b) designing more effective and environmentally-friendly local transport and road networks;
- (c) rationalizing land use;
- (d) developing dilapidated buildings into new buildings of a modern standard and environmentally-friendly design;
- (e) promoting sustainable development in the urban area; and
- (f) providing more open space and community/welfare facilities.

Since the Government's approach is not redevelopment of stand-alone buildings, an area-based approach to eradicating the urban decay problem and removing dilapidated buildings has been adopted. Consideration has been given to restructuring the target areas, rationalizing land use so as to improve the general environment, road network, access and community facilities, including open space.

Nine sizeable target areas have been designated. The URA intends to implement a programme of 200 new projects mainly in these target areas along with 25 uncompleted projects carried forward from the LDC. The target areas are:

- (a) Kwun Tong
- (b) Ma Tau Kok
- (c) Sai Ying Pun
- (d) Sham Shui Po
- (e) Tai Kok Tsui
- (f) Tsuen Wan
- (g) Wan Chai
- (h) Yau Ma Tei
- (i) Yau Tong

(Please refer to Figure 2.3 at the beginning of this chapter for their respective locations in Hong Kong).

These 225 projects cover a total area of 67 hectares affecting about 32,000 flats where about 126,000 people are residing.

To take forward the URS recommendations and determine the priority of projects on which to embark, the URA will consider the following factors:

- (a) the urgency for redevelopment, i.e. whether or not the area is old and dilapidated;
- (b) whether or not sanitation facilities and fire safety servicing are provided in these buildings;
- (c) whether or not the living conditions of the residents are satisfactory;
- (d) whether or not re-planning and restructuring can improve the area;
- (e) whether or not a better utilization of land would be achieved after redevelopment; and
- (f) the rehabilitation potential of the buildings concerned.

The URS proposed an area-based approach. However, there was a lack of an overarching and comprehensive redevelopment strategy that resembled the Metroplan¹⁴ with the need to add the implementation mechanism. Such inadequate guidance meant that the URA is no different from the LDC in undertaking project-based redevelopment without taking full account of the impact on the wider area.

2.6.2 The Urban Renewal Authority (URA)

The URA is the main agent for taking forward the objectives of the URS. The Vision and Mission of the URA are to create quality and vibrant urban living in Hong Kong – a better home in a world-class city and to act on her priorities with ingenuity and sensitivity, join forces with partners and nurturing her people.

The Government issued a policy statement, *Urban Renewal in Hong Kong*, in 1996 proposing amongst other things, the setting up of the URA to replace the LDC. In July 2000, the Legislative Council passed the URAO and the URA was set up on 1 May 2001 as the main agent to contain urban decay in Hong Kong. (repetitive)

The URA adopts the 4Rs approach and her priorities are:

- to accelerate *Redevelopment* by replacing old buildings with new to provide a better living environment and neighbourhood;
- to enable and encourage the *Rehabilitation* of dilapidated buildings to prevent urban decay;
- to *Reserve* by maintaining and restoring buildings of historical and architectural value, and to sustain local characteristics;
- to *Revitalise* through enhancing and strengthening the socio-economic and environmental fabric for the benefit of our urban communities.

¹⁴ The Metroplan is a broad-brush strategic plan first produced in 1991. The intention is to establish a rational basis to guide development in the Metro area of Hong Kong over the long term.

The purpose of the URA, as summarized from the URAO, which relates to redevelopment are to:

- (a) Improve the standard of housing and the built environment of Hong Kong by undertaking, encouraging, promoting and facilitating urban renewal.
- (b) Improve the standard of housing and the built environment of Hong Kong and the layout of built-up areas by replacing old and dilapidated areas with new development which is properly planned and, where appropriate, provided with adequate transport and other infrastructure and community facilities;
- (c) Achieve better utilization of land in the dilapidated areas of the built environment of Hong Kong and to make land available to meet various development needs;
- (d) Engage in such other activities, and to perform such other duties, as the Chief Executive may, after consultation with the Authority, permit or assign to it by order published in the Gazette.

To achieve the objectives in the URS, the authority was given more powers than the LDC. As the first Chairman of the URA stated in his final statement as Chairman:

‘The road to urban renewal has been, and will continue to be, a long and arduous one. Although the work of the LDC did not end without impressive achievements, it has taken us many painful moments to learn our ropes. We have learned that whilst a booming property market and outside funding through partnership with private developers are a potent force of help, we must possess financial independence in order to ride out the cycles of the economy and the property market and the maintain a sustainable urban renewal programme for the long term. We have also learned from bitter lessons that a protracted process of land assembly and site clearance, coupled with the lack of re-housing resources, would definitely put any project in financial jeopardy (URA (2004), p. 21).’

More powers have been vested in the URA than in the LDC. The main difference between the URA and the LDC models is related to site assembly, re-housing and financial resources.

The land assembly procedure under the URA has been streamlined. The URA will continue to seek acquisition of properties by agreement and negotiate with owners prior to final resort to land resumption by the Government. However, the URA is now empowered under the URAO to apply to the Secretary for Development requesting the Chief Executive in Council to compulsorily purchase the rest of the properties once a threshold of not less than 80% has been acquired. The Government's resumption process must be triggered within 12 months after commencement of a project. This is very different from the LDC, its predecessor, which needed to go through a protracted acquisition process having to take all reasonable steps to acquire affected properties in the project area. This resulted in never-ending rounds of negotiations between the LDC and the property owners and only after then, a request could be made to the then Secretary of the Planning, Environment and Lands to recommend to the Chief Executive in Council the resumption of those properties that the LDC had failed to acquire.

As with the LDC, the URA will either dispose of the site to private developers for redevelopment after site assembly, enter into a joint venture partnership with developers or embark on redevelopment on its own.

It is expected that it will take the URA about 3.5 years to get through the planning procedures, land resumption process and clearance of the site. It is expected that the land assembly alone will be completed within a time span of 24 months. Adding the detailed planning and construction stages, the URA aims to complete a redevelopment project within 6 or 6.5 years. The timescale is lengthy largely because of the need for the URA to assemble properties and not just compensate the owners but re-house the tenants as well. The planning procedures are rather different from those that apply to the private sector but involve similar publication and public comments requirements. **Appendix V** outlines the planning procedures stipulated in the URAO. This may be compared to that indicated in **Appendix II** and Table 2.12.

The URA has more re-housing resources at its disposal to accommodate tenants. It has gone into partnership with the HKHA and the HKHS to provide an annual supply of 2,000 public housing units to cater for the re-housing need. The agreement with HKHA reduced the amounts payable for re-housing units for displaced tenants by 60%. A memorandum of understanding was also signed in 2002 between the URA and the HKHS that each would

complete the redevelopment projects of the other with their own resources. For the first five years, seven redevelopment projects have been allocated to the HKHS.

Financial and non-financial arrangements have been put in place to enhance the viability of URA projects to encourage private sector participation and self-financing of urban renewal programmes in the longer term. In May 2002, the Executive Council approved in principle grants of land at a nominal premium for urban renewal sites. In June 2002, the Finance Committee of the Legislative Council also approved a commitment of HK\$10 billion for equity injection into the URA by five instalments from 2001 to 2006. The URA is also allowed to raise funds from the financial sector. This gives financial support to the URA. In January 2003, the URA secured a revolving loan of HK\$3.86 billion from a syndicate of twelve banks to finance the operation of its business as charted in the five-year corporate plan.

Redevelopment by the URA focuses on areas with a poor living environment, in particular the older and dilapidated buildings. Comprehensive redevelopment with careful planning of the area providing adequate infrastructure such as access roads for the site and the wider area, open spaces and community facilities will be conducted to bring about environmental and social benefits.

The establishment of the URA with its wider powers on land resumption and re-housing, greater financial resources for the operation of the URA along with the waiving of the land premium for the redevelopment help to minimize risks to developers. With its powers and framework of operation, it is better placed than its predecessor, the LDC, to reduce risks associated with redevelopment.

While the problems encountered by the LDC have partly been dealt with, such as the waiving of the need to negotiate with all possible means with owners before seeking resumption from the Government and the re-housing issue, other problems remain. Despite the statutory provision on resumption, as discussed in Yeh (1990)'s comments on the difficulty of property acquisition, the URA still faces the need to acquire multi-storey, multiple ownership buildings and strata-titles flats which is itself a daunting task.

Some of the problems identified by Adams and Hastings (2001) and mentioned above remain. There is now an overarching urban renewal strategy, and re-housing through the HKHA and the HKHS has been satisfactory. However, the URS is far from being an explicit and coherent strategy.

In reality, as the Real Estate and Housing Policy Group of the Hong Kong Policy Research Institute Limited (HKPRSL)(2002) commented, the URS only set out the principles and framework for a total of 225 redevelopment projects by district. There was a lack of clear and detailed guidance and direction on how to achieve the area-based redevelopment and the 4Rs approach (which will be elaborated upon in later sections), meaning that the URS was simply a project-oriented approach (Ng 2002) than a people-oriented approach, as was claimed. The HKPRSL added that 4 dimensions would be needed in the URS for the guidance of the URA:

- (a) A strategy for the “core business” of urban redevelopment and regeneration would be needed. The role of the URA should change from developer to land assembler and facilitator, except for non-viable projects that involve the social dimension of urban renewal. The ‘developer role of the URA should be an exception rather than the rule’.
- (b) An implementation strategy to guide the actual process would also be required. A mere ‘stating of the 9 target areas without setting targets for each is not enough’. To achieve the 4Rs and Area-based approach, area-wide strategies would be needed. These require concerted effort from different stakeholders and the Government.
- (c) A strategy to build consensus among stakeholders is needed; and
- (d) A financial strategy should not be left out.

Property acquisition of multiple-ownership buildings is still difficult but has largely been overcome technically. Nonetheless, the social aspect of redevelopment has not yet been resolved. Those affected by URA projects are asking for preservation of social networks and local characteristics. These residents’ requests created difficulties in the acquisition of properties for the project in Sai Yee Street (also called the sports shoe street) in Mong Kok, the Lee Tung Street and in Wanchai as well as Graham Street in Central.

Taking the example of the Lee Tung Street, also called the ‘Wedding Card Street’ in Wanchai, where a critical mass of wedding card businesses has been formed. Redevelopment of the whole street is destroying the well-established business area. The local operators, residents and some volunteers from the community formed a group and lodged objections to their eviction due to redevelopment and relocation.

The Government still fails to commit enough staff and resources to urban renewal. The Planning Department and Lands Department have dedicated teams handling urban renewal but these are small. The Development Bureau has a dedicated team dealing with policy direction. Nonetheless, it can be argued that the Government should take the lead in the area-wide planning study, giving policy guidance, undertaking district urban renewal planning and providing direction on forward planning and development control aspects.

The preface written by the current Chairman of the URA ((URA 2008), p. 12) summarized the risks faced by the URA,

‘the URA also faces risks on the open property market. Unlike private developers, who can change course if necessary, the URA cannot retreat from its commitments’ for public interest purpose.

Though the LDC and the URA were criticized for being slow in initiating and completing redevelopment projects, the ex-CEO of the LDC aptly commented, when being interviewed, ‘though many complained that urban renewal was progressing too slowly, Mr. Shek insists that keeping it slow was important. “Urban renewal involves the multiple problems of people’s livelihood, ownership, re-housing and the social network, and must be handled sympathetically in order to balance the interests of all parties and solve the problems in a harmonious manner”’ (URA 2008), p.56).

Added to the problem was the difficulties for developers to involve in future redevelopment in urban areas. The number of financially viable low-rise building blocks is decreasing. With the announcement of project areas in the URS, the ambit and geography of the URA’s operation is extensive. The declining involvement of developers may be due

to the dwindling opportunities in the urban areas or the dominance of the URA. The Real Estate Developers' Association (1999) commented that 'the URA should concentrate its function in facilitating urban renewal through site assembly and clearance. Under normal circumstances the URA should not assume the role of a developer, nor should it incur property development risks (p.1)' It seems the Government has started to realize the importance of engaging and mobilizing the private sector. There has been a recent policy change by the Development Bureau which set to reduce the application ratio for land resumption by private developers from 90% to 80% under the Land (Compulsory Sales for Redevelopment) Ordinance¹⁵.

The main factors adversely affecting the pace of redevelopment in HK are set out in the ensuing paragraphs.

There is a lack of a coherent and holistic Government planning and redevelopment policy that can help bring development back to built-up areas. Planning policies are put forth and implemented by the Government Planning Department whilst redevelopment is initiated and implemented by the URA. There is a clear division of labour, but inadequate cooperation at the strategic and district-wide level. An overall plan for redevelopment or regeneration of a whole planning district is necessary and would be helpful to convey the Government's redevelopment priorities and proposal for owners and developers to follow.

Although the URA has been empowered by the new statutory provision to resume the remaining properties once 80% of the properties in a project have been acquired and thus is not as adversely affected by difficulties in property acquisition, ownership constraints still slow down the pace of redevelopment and limit its scale for the property industry. In multiple ownership buildings, owners may have different idea about the timing for redevelopment or rehabilitation. The fragmented ownership also results in different expectations amongst owners, especially in price and valuation, thus lead to a long acquisition process. Hope value and property value may be different from property price. Hope valuations mean landowners' expected values for a development taking into account the owner's own wishes and the possible redevelopment value. This is usually inflated and

¹⁵ The Land (Compulsory Sale for Redevelopment) Ordinance (LCSRO) (Cap. 545) was amended in 2010. It provides for application to the Lands Tribunal the compulsory sale of a particular whole lot if a person (other than as a mortgagee) owns not less than 90% of undivided shares in the said lot provided inter alia that the building is over 50 years old.

deviates from the market value. Property value refers to the intrinsic value of the property or land, including its use, exchange and emotional value. These value figures may be very different from the property exchange price for which will be determined by the interaction of demand and supply in the market. Market price may also be largely affected by the relative power of the individual owners who are quite disjointed in Hong Kong as compared to the developers who are few and powerful. Land rent therefore largely accrues to developers.

Large developers are powerful in Hong Kong as demonstrated by their heavy involvement in the economy. However, small developers do not have the resources or expertise to compete on a meaningful scale. This leads to large developers dominating the market price in terms of property acquisition and sale price and above all in the pace of redevelopment in the society.

Nevertheless, the URA still operates according to prudent commercial principles and thus focuses mainly on viable schemes. Non-viable schemes are taken up only slowly, even by the URA.

The economy in Hong Kong is slowing down and Guangdong province residential prices are relatively lower than Hong Kong. Some Hong Kong residents are moving across the border as they work and get married in China. Developers are more interested in development in China, which will yield a bigger market, better returns and longer-term potential relative to Hong Kong. Many rich people from the mainland are also buying properties in prime residential areas in Hong Kong, raising the prices tremendously and resulting in a dual residential property market – the prime areas versus the ordinary residential buildings.

Government planning control lowers development intensity for the urban core and thus redevelopment potential. Green groups and interest groups are vexing powers and slow down developers' actions and activities in Hong Kong. Public participation in the planning process poses risks to redevelopment.

2.7 Conclusion

The first part of this chapter sets out the developers' perspective on redevelopment and the Government procedures in Hong Kong. The latter part of the chapter critically examined the URA actions and the effectiveness of both the URA and the overarching strategy, the URS. The two sections together put forth the following issues:

1. The major risks of redevelopment to the developers are mainly related to the monetary returns. Location is of paramount importance and enormous development costs, especially on the property acquisition costs, are fundamentally affecting developers' decisions.
2. The major obstacles to redevelopment in Hong Kong are the difficulty in acquiring properties, high land premia, recent amendments to the land use planning control, and the overlapping land, planning and building control.
3. There is market and regulatory failure as suggested by Loh (1997). A few major developers dominate the market and market mechanism is not working efficiently. The Government's regulation are orderly, allowing much opportunities for developers whilst creating some obstacles. As commented by REDA, the URA should remain a land assembler and facilitator rather than competing with developers. The developer role of URA should be an exception rather than the rule. An implementation strategy to guide the redevelopment process set out in the URS is lacking. There should also be a strategy to build consensus among stakeholders.
4. An overarching planning and redevelopment policy has been lacking in the URS.
5. More powers have been given in URS for the URA in terms of streamlining the land assembly procedure and provision of financial resources. Nonetheless, URA can only complete a project with a relatively longer timeframe of 6 to 6.5 years due to the need for heeding all the statutory procedures. The multiple and strata-title ownership of units, as well as the hope valuations of the property owners, in a building remain the biggest obstacle for redevelopment by URA.

All these issues will be taken into account in the formulation of the conjoint analysis.

Chapter 3: Risks of Redevelopment

3.1 Introduction

This chapter explores the risks in the redevelopment process borne by developers. To understand developers' behaviour, economists usually develop models. The neo-classical economics model will form a basis for the discussion in this research.

Urban land economics provides one explanation of how developers make decisions by emphasising the capital value of a building in its existing use and after redevelopment. The research presents primarily a neo-classical view of markets from a developer's perspective because it is argued that market demand and supply determine the decisions of developers. Basic economic theories explain that consumers' demand can be derived from the marginal utility of an additional unit of a commodity and the budget constraints on consumers. Based on these, developers make site bids. Developers gauge consumers' preference through different methods, such as looking at market statistics, past data and surveys.

The third section discusses the relationship between the property market and redevelopment. One of the most important functions of the property market is to set the market price for land and development. Developers need to know market demand and supply conditions, consumers' preferences and the performance of the economy as well as the risks of change in all these. The development cycle is discussed to complete the picture of characteristics of the property market.

The fourth section will introduce the developers and other agents engaged in redevelopment. The characteristics and attitudes towards risk of different developers and the other agents are discussed.

The fifth section analyses the various approaches to understanding the development process and the linear process adopted by this research.

The sixth section sets out the definition of risks and briefly discusses how risk is calculated. It explains that risks are entailed at every stage of the redevelopment process. As such, the major risks in each stage of the development process are then explained in the sixth section.

The last section before the conclusion examines and discusses the current understanding of the perception of risk by developers.

3.2 The Pricing of land

This section explores how does the market discover market price for a certain plot of land.

Bid-rent Curves

Land economics textbooks (see for example, (Balchin 1995) and (Evans 1983)) talk about bid-rent curves that help to derive the market price of land. Bid-rent curves show in graphical form the demand/willingness to pay for a specific type of land such as commercial or residential at a certain location (Figure 3.1). For commercial land uses, such as office or retail land, they depend on the profit the land could bring. For residential land, bid-rent curves show the utility derived for the residents.

The diagram below shows what various land-users are prepared and able to pay for good access to the Central Business District (CBD).

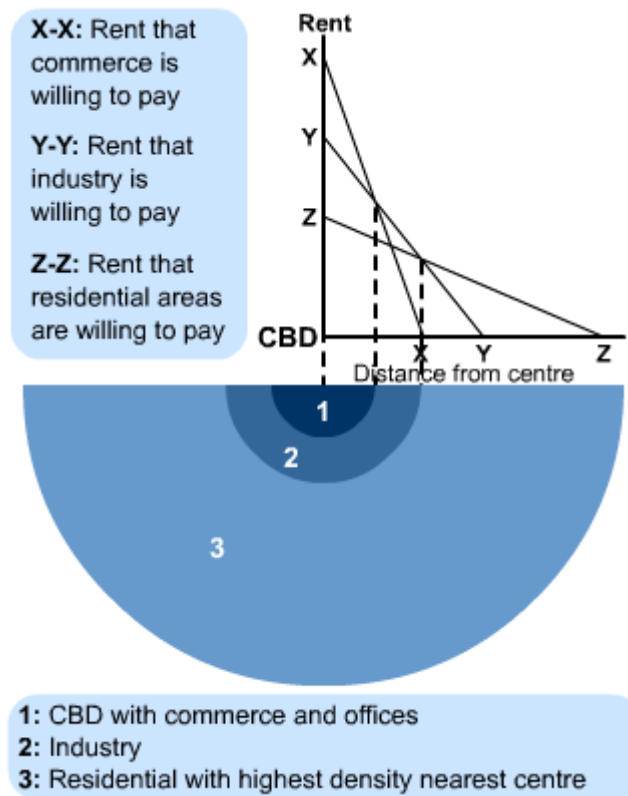


Figure 3.1 Bid-rent curves (from GCSE S-cool

<http://www.s-cool.co.uk/alevel/geography/urban-profiles/central-place-and-bidrent-theories.html>)

Bid-rent curves depend on the concept of ‘Land Rent’ or ‘Commercial Rent’. Land Rent is payment for the use of land. It comprises two components – transfer earnings and economic rent. Transfer earnings refer to the minimum sum required for retaining the piece of land in a particular use A so that the land would not be transferred to use B which is the next highest bidder for the land due to competition for use. Economic Rent (also known as scarcity rent) is the financial reward for the “scarcity value of land in excess of its transfer earnings” ((Balchin 1995), p. 9). It is the rent made available because supply is inelastic to an extent. If the supply curve were highly elastic as in the long run, the curve would be almost horizontal rather than upward sloping. In that case, the economic rent would be zero or minimal. As shown in Figure 3.2 in the following page, part of the land value is opportunity cost (LBZO) whilst part is economic rent (RBZ). The split, as mentioned before, depends on the elasticity of the supply of land. It is worth noting that economic rent might not be accrued by landowners.

Land Rent in Land Market

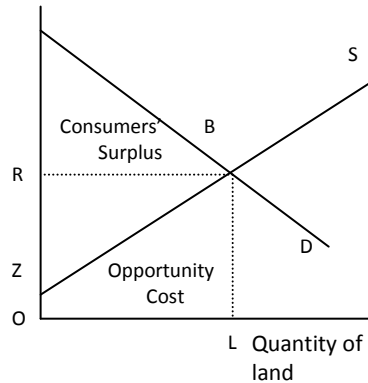


Figure 3.2 The components of commercial land rent in a competitive market (from Fig. 3.4 of (Ball 1998), p. 59)

The demand curve (D-D) for land is downward sloping. For commercial land, it is a function of the marginal revenue product, i.e. the additional net revenue a firm can obtain if an additional unit of land is deployed. Take the example of retail floorspace. If additional floors were built on to a high-rise tower block for retail purpose, more intensive capital outlay would be needed and this drives up marginal costs (MC). Besides, higher floors achieve lower rents and thus marginal revenue (MR) is also decreasing. Where $MC = MR$, developers choose that as an optimal density.

For residential land, demand depends on the utility for an additional unit of land involved. The utility derived will be linked to the household size. For the example of a family of four, a four bedroom house would be optimal, and five or six bedrooms may also be acceptable but any size larger than that would be less desirable given the larger mortgage needed. There is a diminishing return and utility for each additional unit of land involved, and thus the demand curve is downward sloping.

The supply curve (S-S), on the other hand, is upward sloping. Higher prices would induce the conversion of more land to the respective use, whether commercial or residential. It is assumed that there is perfect competition in the market, i.e. many competitors with perfect information.

The maximum site bid is determined by the respective site-bids for different land uses, the location of the site, planning and other government regulations. The market price will be at the point where the marginal revenue (represented by the demand D-D curve) equals the marginal cost (represented by the supply S-S curve). This is the equilibrium point which is set at point B where the quantity at L and the land rent at R equate to each other. The total land value is RBLO. It is also important to note that competition and perfect information mean that there is no distinction between potential profitability and land rent at a given location. However, for the real-life land market, there is no perfect information and perfect competition.

In the absence of Government intervention, the apportionment of land to different land uses would be determined by supply and demand. The proportion of the payment for a piece of land that would be accrued as transfer earnings and economic rent respectively would be determined by the elasticity of the supply of land. If the supply of land for, say, commercial use is abundant, the supply is elastic and most of the payment would be in terms of transfer earnings. However, in the case of a shortage in the supply of land, say high-class residential land in a coastal area, supply will be relatively inelastic and most of the payment will be in the form of economic rent. It is worth noting that scarcity may have a strong influence in the short to medium term, while in the long run, land can be put to more intensive use or the supply can be increased by say reclamation in the case of the high-class coastal residential areas.

In an efficient market, land will be allocated to the highest bidder, the best and most profitable use. One may recall there are physical and economic characteristics of land. By physical characteristics, it means land is immobile, indestructible and non-homogeneous. For economic characteristics, we refer to the high price, the need for borrowed funds, the search costs and information gather costs involved, the scarcity of land, the effect of changes in economic and demographic factors in the surrounding area on a piece of land, the influence of the quantity and quality of surrounding structures as well as the fixity of land (Epley et al (2002), p. 13-14). From this description of land characteristics, it is apparent that location plays a very important role. Developers are also “constrained by the relative inflexibility of his/her capital and labour inputs” (Balchin 1995), p. 10). The importance of location is therefore paramount.

Developers' required returns, remuneration for taking risks, and payment for entrepreneurial spirit and ability are important elements that are reflected in the developers' development appraisal. As a general rule, developers try to maximize their returns commensurate with perceived risk. Developers with enough resources can accumulate land at low costs gradually and well before the development potential of an area becomes obvious to the market. They complete the development and sell to the market, taking the greater part of the economic rent of both the scarcity of the land and the development. This is a kind of speculation on the part of the developers and will drive up land and development costs gradually as the demand curve shifts to the right. This is because developers with foresight will buy when demand is lower i.e. the demand curve is on the left. When more and more developers discover the perceived profits, demand will increase and shift to the right, other things being equal.

In the negotiation between landowners and developers, the latter often use agents to gather land and property gradually and in secret. The lack of perfect information in the land market puts landowners in a less advantageous position compared to the developers who are the buyers. Therefore, developers can sometimes pay landowners a relatively lower price and maximize their portion of the economic rent. As there is a risk in doing this, it can be seen partly as a payment for risk-taking.

Consumer surplus appears in the land market too. Here it means purchasers of land have paid a lower market price than they might have been prepared to pay. In practice, the land market is less than perfect and not fully competitive. If landowners or developers can convince the consumers of the uniqueness of the land or property on offer, they can price discriminate, capturing the consumer surplus through charging differential prices. Location is usually the attribute that differentiates. The classic example would be offices in the CBD for which higher rents can be charged as compared to out-of-town locations. This also happens in residential development in Hong Kong where developers charge different prices for different floors such as higher prices for upper floors with a hill view or harbour view, and different prices for periods of release of flats for sale because consumers are willing to pay more.

The reason for associating producers, i.e. developers, with consumer surplus is because there is similarity between decision-making behaviour of developers and consumers making consumption choices. There are competing sites or development opportunities from which the developer must make a selection. These development opportunities, like some consumer goods, are also highly complex and comprise a number of different attributes involving physical, economic, financial, planning and profit aspects.

Consumer choice and utility functions

After examining how the market arrives at the market price of a plot of land, it is worthwhile to look further at neo-classical approaches to how developers choose between different pieces of land and different units of properties. The following will discuss the indifference curves and utility function concept.

Land economics has incorporated the theory of consumer choice. Consumers' preferences are revealed in indifference curves and utility functions. Consumers are considered to make choices by comparing all bundles/combinations of commodities that give the same level of satisfaction or utility as set out in indifference curves or utility functions. Both of them are downward sloping and cannot intersect. The only difference between indifference curves and utility functions is that the former uses the ordinal properties of utility which allows for the ranking of alternatives whilst the latter is obtained by attaching a number to the utility arrived in each market basket. Market basket A may be preferred to basket B. A higher indifference curve or utility function in the utility model will be preferable to a lower one.

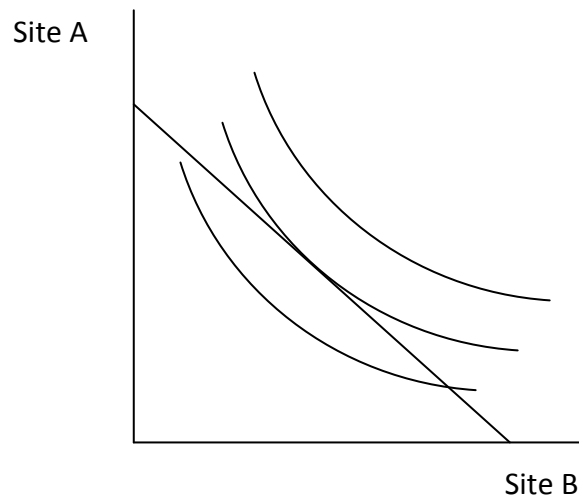


Figure 3.3 Indifference Curve with a Budget Constraint

Though more of each good and service will be preferable, consumers are constrained by their budget line. Budget lines represent all combinations of goods and services which consumers can obtain by spending all their income. An increase in consumer income will shift the budget line outwards whilst a decrease in income will shift the budget line inwards. The budget line rotates at a fixed point either in the vertical axis or horizontal axis denoting a change in the relative price of the two goods whilst holding income constant.

Consumers' utility will be maximized if the budget is tangent to one of the utility functions, i.e. when the marginal rate of substitution between the two goods is the same as the ratio of the prices of the two goods to be purchased.

The relative ratio of the two goods which the consumer will be willing to pay for reveals the choice of the consumer, i.e. one good is preferable to another and by how much.

Take, for instance, the choice of whether to go ahead with a development. The cardinal properties of the utility function will show the risk premium a developer (consumer in the redevelopment market) will attach to his choices. If a utility function shows a diminishing marginal utility, that means he is risk averse to Choice A on the horizontal axis because he considers that the risk of taking an additional unit will override the utility (in monetary

returns) obtained. Usually, as more of each good is obtained, he will be willing to sacrifice less to obtain an additional unit.

As has been discussed, property developers attempt to maximize profits. To assess profits, they undertake development appraisals. The basic method is the residual method. It calculates the estimated capital value of a development in its final use, usually the highest and best use, then deduct the expected development costs of the project, including the developers' profit and his required return for risk taking, leaving a residual, which represents the highest amount that would be paid for the land.

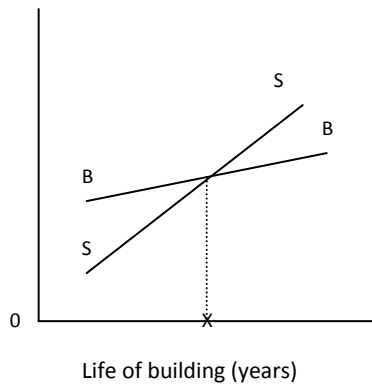
There are more refined appraisal methods, including cash flow analysis and the discounted cash flow analysis, as well as tools to analyse risk such as sensitivity analysis and Monte Carlo simulation. These will be discussed further in Chapter 4.

Redevelopment of Individual Sites

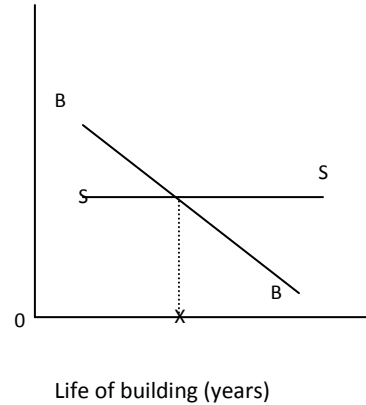
Since the concern of this research is on the redevelopment of properties, this section will discuss how developers arrive at the right timing for a redevelopment.

Balchin (1995, p. 24) stated that there are two basic values of urban property – “the capital value of buildings and sites in their existing use and the capital value of cleared sites in their best alternative use”. As shown in Figure 3.4 below, which is from Balchin's Figure 2.7, when price is relatively stable (Figure (b)), the capital value of the existing use will fall over time when the property becomes ‘obsolete or wears out’ (Line B-B) whilst the capital value of a cleared site remains more or less unchanged (Line S-S). In times of inflation (Figure (a)), both capital value for existing use (Line B-B) and cleared sites (Line S-S) increase but that for the cleared site will rise more sharply partly because the costs of maintenance and repair for a site in use would be higher bringing down the land value. In Figure 2.3 below, redevelopment should take place in X years *ceteris paribus*.

(a) Inflation



(b) Price stability



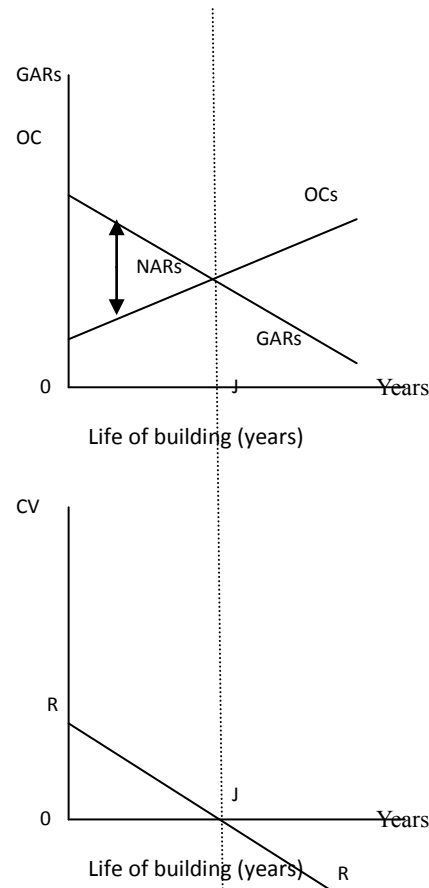
Note : BB = capital value of building and site in existing use

SS = capital value of cleared site in its best alternative use

Figure 3.4 The maximum economic life of a building (from Fig. 2.7 of Balchin (1995), p. 25)

Figure 3.5 below explains when redevelopment will take place. Operating costs (OCs) of the building in existing use are rising whilst the Gross Annual Return (GAR) is diminishing as the physical condition and use value of the building become obsolete due to older age and changing demands. The building may be less competitive compared with other newer buildings. At J years, the Net Annual Return (NAR) falls to zero.

As shown in R-R, the net present value / capital value of the building is derived from the NAR. Redevelopment should take place at J when the NAR comes to an end. After that year, the building will be abandoned.

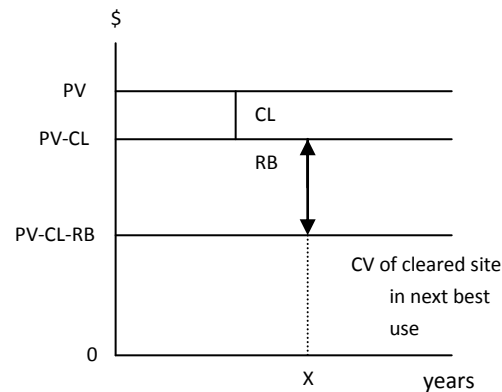


where GARs denotes Gross Annual Return
 NARs denotes Net Annual Return
 CV denotes Capital Value
 OCs denotes operating costs

Figure 3.5 AR and Capital Value of a building in current use over time (from Fig. 2.8 of Balchin (1995, p. 156))

However, land and property markets, especially for redevelopment sites, faces market failure and redevelopment may not take place at the optimal time and scale. Balchin (1995, p. 25) suggested that owners of properties might extend the life of a building due to such factors as personal memory, and architectural or historical value. ‘Inaccurate valuation’ of the both the site in existing use and after clearance for alternative use may ‘create inertia’ (Balchin (1995), p. 25). Multiple ownership of a piece of property, long leases and the presence of tenants may delay the redevelopment time. Planning controls such as the designation of an area as green belt or as a conservation area may restrict or create hurdles to redevelopment which owners find onerous and they will therefore be

unwilling to take redevelopment forward even though the market may arrive at a market price and there are buyers willing to take up the piece of land at that price. Although redevelopment may be ripe in principle for a certain building, whether or not redevelopment actually takes place depend on the appraisal of a developer. Figure 3.6 below explains this appraisal for redevelopment by a developer in simple terms.



where PV denotes Present Value of NAR in next-best use
 CL denotes Site Clearance and Site Preparation Costs
 RB denotes Rebuilding Costs

Figure 3.6 Capital Value of a cleared site in new use upon redevelopment (from Fig. 5.7 of (Balchin (1995)), p. 157)

When developers propose redevelopment, they will make sure that the capital value of the cleared site (CL) will be larger than the capital value of the building and site in its existing use. This capital value of the cleared site is measured by deducting the present value (PV) of the site in the new use by the cost of site clearance, land preparation costs such as the provision of road and drains, and the cost of rebuilding (RB). An increase in clearance costs (CL) and rebuilding costs (RB) will decrease the present value of the cleared site, other things such as rent being equal. This is true vice versa. It is worth noting that the PV is assumed to be constant at whatever point in time but in reality, it shifts over time due to changes in demand and supply factors, such as a change in market tastes will change demand or technological advancement may increase supply.

3.3 The Property Market and Redevelopment

As risks are reflected in the market price, this section will discuss how the property market enables developers to acquire development units and arrive at the market price for developments. An understanding of the redevelopment sub-market will also be provided.

Importance of the Property Market

The property market is vital to the health of an economy. Properties require the input of large sums of money and once built will last for a long time. With the enormous wealth involved and the long-lasting consequences due to the durability of buildings, real estate development has wide-ranging and irreversible impact on shaping the built environment at least in the short to medium term. As Gibb (2003, p. 889) stated :

“real estate is both a key driver of urban change and a potential constraint on city performance.....also plays an important social justice role by redistributing resources, jobs and opportunities across space.”

Governments devote much attention and resources to regulating and facilitating the property market and housing provision, and sometimes even the supply of land for commercial and recreational uses, with a view to impacting positively on the local and national economy.

Characteristics of the Property Market

In neo-classical theory, the property market explains the price mechanism which brings demand and supply for properties and land into equilibrium and thus stimulates developers' and investors' actions. However, as Healey (1991) commented, simple models ignore the different forms of demand, such as occupier and investment demand; and variety in the motivational forces for agents in the development process which may be other than profit. An example is architects' concern with design and would not like to be labelled as money grubbling (Guy and Henneberry (2002), p. 118). Simple models also ignore the distortions in appraisals; and the complexity of the development processes. This calls for the institutional view, which describes the property market as the institutional

arrangements through which real property is used, traded and developed, and the wide range of actors involved in these processes (Guy and Henneberry (2002)).

The neo-classical view focus is on the outcomes, i.e. what results rather than how it comes about. In contrast, the institutional view focuses on how it happens. Later sections will further discuss the difference between the two and their application to this research in the next two chapters.

The property market is not a single entity. It comprises a number of sub-markets divided in terms of geographical location, importance nationally and internationally, and use types such as residential, retail or offices. However, all property markets trade real property rights. A sub-market would comprise “all properties that show greater homogeneity” of use than the, say, office market as a whole (Guy and Henneberry (2002), p. 58). They develop for reasons as accessibility and agglomeration. For instance, certain locations allow easy access for banks, financial institutions and insurance companies, etc. and thus develop office sub-markets (Guy and Henneberry (2002)). Watkins (2001) researched twenty international property market studies and showed widespread belief in the existence of housing sub-markets (both spatial and stock type).

Dunse et al (2002) and Leishman et al (2004) both researched the existence of sub-markets in the housing and office sectors. Building on the Columbia University housing economists’ framework of urban housing markets in the 1950s and 60s, Leishman et al. (2004) argued that Alonso’s location theory of 1964 was not fully applicable to sub-markets nowadays. They argued that hedonic price studies, which have monopolised the analysis and testing for urban housing sub-markets based on the existence of price differentials reflecting the neo-classical economics paradigm, are not sufficient to understand sub-markets. Instead, it was suggested to base their research on the Columbia University approach of a “behavioural model and disaggregates the market on the basis of lifestyle, image, tastes, preferences and other social-cultural variables” (Leishman et al. (2004), p. 272). This effectively examines the “role of demander sub-groups”, recognising that “different types of buyers are drawn to different classes of property depending on their needs, preferences and resources”. Actions of consumers which lead to “interaction of distinctive demand and supply schedules” are also factored in and thus require “an analysis of household search and migration behaviour within urban areas” (Leishman et al. (2004) p. 273). A similar proposition was put forth for the office sub-markets with different

preferences and business requirements in the demand side and direct demanders towards particular subsets of stock. The supply side comprises a set of property types (Dunse (2002), p. 485).

The property market is not unproblematic. Some submarkets are more efficient than others. There is “evidence on thin markets, information problems, cyclical instability and sub-markets, among other dimensions of market failure” (Gibb (2003)). It does not adjust readily to accommodate the changing space requirements of users. In fact, the property market is highly complex, subject to market failure as a result of which the price signals have not worked efficiently. It can be argued that this is due to the structural and informational problems related to high transaction costs and poor information provision.

Real estate properties are physical entities which are location-specific and physically immovable. The time required to create new property may be lengthy, involving site acquisition, securing planning consent, obtaining finance, construction and disposal of the properties.

Real estate property as a legal entity also causes problems for redevelopment. Legal rights over property may be in the form of freehold or leasehold to allow a variety of objectives from the users, investors and the Government to be realized. The ownership interests will be governed by legislation of landlord and tenant law, and constrained by other statutory requirements such as the planning legislation.

Besides, whether or not developers undertake redevelopment depends on the presence of a buyer/owner for the completed property. However, the existing structure of legal interests may either facilitate or restrict the redevelopment of property (Keogh (1994)). For instance, respect for property rights is important for active investment and user markets to be created (The distinction between user and investment markets is indicated in Figure 3.7 below). This may also support sale-and-leaseback options to release working capital for the developer.

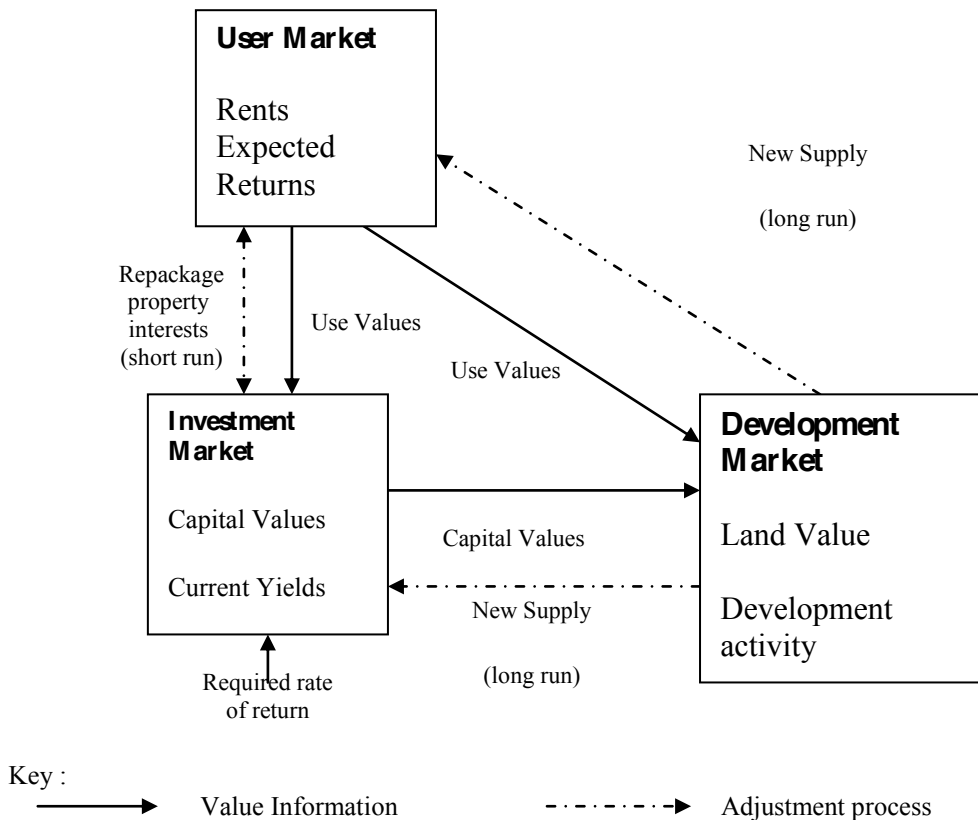


Figure 3.7 User and Investment Market (from A simple model of the property market – Source : (Keogh 1994), p. 59)

The three components of the property market - user, investment and development markets - are interrelated. The user market represents the right to use property; the investment market the right to hold a purely financial investment interest in property and the development market responds to the changes in the user and investment market. This stimulates development activity which in turn fuels further user and investment supplies into the market (Keogh (1994)). Trade occurs and prices are determined by supply and demand in each market arena. Information flows between these markets are assumed to lead to adjustments.

Though equilibrium can be reached in the land market assuming perfect competition and information, the stability of the equilibrium is important. Land markets are inelastic because of planning and other rigidities. Besides, user markets are inelastic also because of development lags. In other words, when faced with temporary shocks, the market has to be responsive and adjust to the new equilibrium quickly. Added to that is the durability of a development which will not be demolished in a short time but be left vacant or used sub-optimally if the estimation of demand and supply is incorrect in the first place. Ball (1998,

p. 65) commented that the “slow speed of adjustment ... is likely to increase market-distorting persistence effects”. If the market is less than perfect in terms of competition and provision of information, the short term direction of the adjustment will also be impaired.

Redevelopment Sub-market

Information in the property market can be scant due to infrequent and largely localized transactions. Land and property markets can prove to be highly cyclical and unstable market with deficient information. This is particularly true for urban regeneration areas. To the users, each piece of land or each single unit of property is different from another. Apart from location, there are differences in size, type of materials used, age, condition and the existence of special attributes. Only a limited proportion of users relocate to gain from rent or price differences. They move mostly due to necessity such as a change in job location, family reasons, income or business conditions. Landowners may not be willing to sell due to an inflated expectation on the prices of land (Adams et al., 2001).

Landowners inertia and planning policy may constrain the supply of land whilst the lack of information and high transaction costs, risks involved and low user demand in areas such as the inner city restrict the demand (Adams (2002), Adair et al. (1999, 2005), Adair (2003).

For most stigmatised redevelopment areas where the markets are thin, the economic conditions that bring about new development may be very different from the condition when it is completed. This leads to persistent dis-equilibrium with over supply or under supply, leading to volatility of prices. Properties take several years from inception to completion for the market to sell. Therefore, the land and property market adjusts only very slowly. There is always a time lag between the peak of the prices and the peak of units coming onto the market.

(Balchin (1995), p. 11) commented that the land and property market is

“not organised and there is no central buying or selling place... (but it) consists of an aggregate of a vast number of deals, large and small, involving heterogeneous buildings and sites”.

Transaction costs are high due to the need to engage appraisers to assess the value of a property and legal professionals for the documentation, and to complete government procedures such as payment of stamp duty.

Government efforts in terms of talents, financial contribution, relaxed regulation and commitment to draw upon private finances and resources are generally needed to stimulate development in the regeneration areas.

Property transactions are now from a wider territorial catchment, or even of cross-border. Nonetheless, Balchin (1995, p.11) found out that “the land professions attempt to bring together buyers and sellers, generally within a fairly local context” (Balchin (1995)).

The Development Cycle

One of the major risks in the property market is change in economic and market conditions, and specifically to conditions in the international, national and local economy and property markets. The development cycle is discussed in the next section.

There are cycles in development and very often investments are more volatile than output. Barras stated that ‘long cycles of 9-10 years duration are generated by the exceptionally long production lags involved in property development’ (Guy and Henneberry (2002), p. 184). He noted the difference in volatility between office and other sites due to the difference in building, planning and construction period in the two sectors. Balchin (1995) also commented that :

“it is fluctuations in profitability compounded by the long lag between site acquisition and completion of a scheme which create successive cycles of development”.

Profitability of developing depends on supply and demand conditions in the user market and the investment market. These affect the level of rent, yield and capital values.

The accelerator theory of investment suggests that accelerating output growth will increase the desired level of investment. It is noted that firms invest when the marginal cost of another unit of capital is lower than the marginal benefit, i.e. the present value of future operating profits to which it is expected to give rise over a lifetime. Nonetheless, inflation does happen and it is therefore the changes in expectations about future profits that are important in determining investment. When there is inflation or decrease in real interest rates, expectations about future profits increases and the desire capital stock increases, thus developers will increase producing property units for sale. This leads to upward cycle of development boom. Similar but reversal of trends happen when there is a downturn. The multiplier-Accelerator model thus explains the development cycles.

The following will explain the development cycle and this theory in more detail.

The development cycle is kick-started when there is rising demand. This will lead to an increase in rents in the user market. Nonetheless, yields in the investment market will decline due to the higher profitability and thus relative lower risks. As yields decrease, capital values will be raised making development projects more profitable. Developers will be attracted by increased profitability to commence development and development appraisals with variables in the equation extrapolated from emerging trends would reinforce the decision to build. With ever-rising demand, more schemes will be initiated and the peak of demand will soon be reached. However, the supply may continue due to the time-lag from commencement to completion for a development. This process will continue until the economy reaches a turning point. After that, a similar downward spiral will begin and accelerator theory again applies but in a different direction i.e. there is contraction of investment, output and capital stock (Sloman (2003), Begg (1984), Pindyck (2009)). Some of the schemes embarked upon later in the time line might come on to the market when there is an over-supply. With excessive supply, rent will be lowered, yields will rise whilst capital value will fall. Supply will slow down until there is unmet demand once again. In this way, the cycle begins and repeats itself again.

However, as will be discussed in Chapter 4, some developers and investors may make decisions counter to the cycles to add value. They seize the opportunity when the development is undervalued or when the market is unfavourable. Some even spot opportunities and acquire them from bankrupt companies.

3.4 Developers and Other Agents

Typology of Actors

There are a number of participants in the land and property markets. They include property developers who engage in land assembly, design and construction, landowners who hold land and property titles, financial institutions who provide the funding, and private investors and individuals who buy the development as well as interest groups. The impact of each of them will be explained in subsequent paragraphs starting with those with potential for most impact on the price of land.

Private individuals may engage in the land and property market for investment or to fulfil personal owner-occupation needs. For occupiers, development are essential to their core operation and “a reflection of their business practices...Value is extracted from design and development practice” (Guy and Henneberry (2002), p. 254).

Investors interested in buildings as “purely quantifiable assets...as assets to purchase, or as regular and reliable income streams to manage as part of their existing property portfolio...building’s worth is judged..against the past investment performance of similar stock, and ...against the investment performance of other investment mediums such as gilts and equities” (Guy and Henneberry (2002), p. 255).

Financial institutions may engage in the development process as investors or lenders of funds to developers or to individuals as mortgage finance. Institutional investors may engage in a longer part of the development process which extends beyond project completion to holding property for investment purposes. Being managers of the funds for their policy-holders and earnestly seeking returns for the latter, they can finance their developments out of their own funds rather than depending heavily on borrowing and so reduce the interest payments. As such, they too have a stronger shield against the risky nature of the development business. “As a result, the institutions may be prepared to accept slightly lower profit margins, so long as they achieve an internal rate of return over their longer-term holding period similar to their target rate of return on investment purchases” (Morley in Guy and Henneberry (2002), p.74). It is worth noting that real estate is only one asset class that investors are involved in.

Financial institutions who invest in the land and property market include insurance companies, pension funds, and charities and trusts who may all be very different in their decisions. Life assurance companies and pension funds need to generate returns for payment in future to subscribers. The insurance companies need to pay off insurance claims from time to time and thus cannot engage a too large fraction of their capital in long-term investment, though those involved in life assurance may have a longer holding period. These companies hold a portfolio of short to long-term assets, including land and property which is considered a good hedge against inflation. They focus on prime properties including prime offices and retail floor space. Sometimes, they buy a whole block of properties either in the market or through acting as joint venture partners or forward funding developers' schemes at the beginning of the development process. The direct involvement in development will allow them more control of the investment whereas prime properties and whole block of buildings investment will reduce the risks involved. The tax regimes these companies face also encourage them to buy properties rather than holding shares of property companies which require payment of corporation tax (Guy and Henneberry (2002) and Harvey (2004)).

Pension funds will invest in long-term investment and are interested in property investment to gain from rentals and capital appreciation. However, even pension funds are divided into those that are balanced towards early or later maturity. If they have a longer time to maturity and need not pay pensioners soon, they would be more willing to take risks and engage in more property investment which is a kind of fixed asset and is considered risky in the long term.

In the late 1980s and early 1990s, banks and institutions in the UK were actively involved in lending funds to developers and investing in properties at the peak of the property cycle. However, the downturn in the market caught them out and many developers went bankrupt. This has been repeated in the recent housing crash as the Government bailouts were necessary.

With this unpleasant experience, the financial institutions learnt their lessons and tended to be more cautious in their involvement in property investment for a long time after 1990s but the recent evidence of the housing bubble suggests otherwise. This, together with the "explosion in global equity markets allied to deregulation ..." (Harvey (2004), p.27),

properties become one of the selections in an institutional investors' portfolio of investments and the proportion given to it was diminished.

However, their impact on the property market is still immense and their perception and rigorous appraisal of risks using computer programmes has a great impact on the development industry and the developers' appraisal of risks too.

Charities and trusts need to make regular payments to beneficiaries over a long time without much income from external sources. They therefore are required to generate returns from their assets to provide a regular income and to maintain the necessary asset size of the trusts and hedge against inflation. They will constantly review their portfolio and need to invest in a high-income earning portfolio with low risk.

As for property developers, they "enhance the economic value of land through capital investment in development – that is, the value of land is increased by the development of buildings which will attract secure rental income and, therefore, investment capital...(they have) knowledge of local market conditions, meshed with an almost 'mystical' instinct, is mobilised in entrepreneurial initiatives which are checked and balanced by making 'residual' financial calculations of the economic return gained by the act of developing land (Guy and Henneberry (2002), p. 252)".

Developers are often so highly geared that a large proportion of their capital comes from loans from banks as compared to securities issued on the stock market with the latter reflecting the assets and ownership of the company. Some non-property companies, such as the PCCW in Hong Kong, which is a tele-communications company listed on the Hong Kong Stock Exchange, recognized the intrinsic assets of their large property holdings in the form of offices and standalone tele-communications installations. This company decided to list its property holdings in the stock exchange and make the assets more liquid.

There are different types of developers, each with different objectives. They can broadly be divided into public and private developers. Public developers are the government departments and quangos at arm's length from the government. Private developers include property development companies and property investment companies. The two types of developers differ in their legal status, and their objectives and therefore the way they make decisions.

Public developers' objectives are seldom primarily for profit-making though there may be a requirement to generate a return. Their aims are mostly to deal with market failure by providing the necessary public goods such as government buildings, roads and infrastructure or to internalize externalities such as the conservation of an area as a country park for public enjoyment and protection of the environment. Sometimes, they need only to balance their accounts and maintain their duties to achieve public purposes. They therefore hold longer and wider views than private developers. It is worth noting that public developers are usually provided with statutory powers such as that for compulsory purchase and other special privileges such as exemption from certain statutory obligations. Government departments also engage in development directly in providing services to the public.

Private developers, especially trader developers, make a living from the business and therefore aim at maximizing their profits. Factors considered by government and public agencies such as the impact on the sustainability of the environment and the economy, and the social and political aspects as well as the creation of externalities may not concern them. In other words, they are motivated principally by private rather than public good in welfare economics terms. There are some private developers who may be building for their own trade, such as manufacturing companies building tailor-made premises to be used as factories, social welfare organizations building welfare facilities such as homes for the aged and entrepreneurs building hotels as businesses.

However, they all have to consider the costs and returns of undertaking a development of any sort and weigh these against their objectives. Private developers generally strive to maximize profits, although some will simply strive to ensure they incur no loss.

Profit-maximising Private Developers

As commented at the beginning of the chapter, the target group of this research comprises private developers who seek profits-maximisation. This group can be sub-divided into different types, according to the property market they engage in, their size and motives of development. Developers are generally differentiated between those operating in the

commercial and others who specialized in residential markets. According to Byrne (1996), broadly, UK developers fall into three categories :

- Residential developers (house builders);
- Commercial developer traders; and
- Commercial developer investors.

The house builders are large in scale and they specialise in acquiring large pieces of land, providing large amounts of housing units.

Commercial developer traders “perhaps come closest to the general public’s idea of a property developer” (Harvey (2004), p.39). They focus their activities only on short-term gain in development, trading on property stock to make profits. They will construct a property and sell it for a return. They do not hold many properties as assets or investment.

“They tend to be entrepreneurial risk takers, ones who make good profits in good markets but who tend to disappear when the markets takes a downturn” (Harvey (2004), p. 39).

Trader developers, without strong financial backing, rely on a continuous income stream to survive. They therefore interact closely with lenders and possess a strong awareness of the downside risk of each project (Fisher & Robson, 2005).

On the other hand, commercial developer/investors tend to be more risk averse. They look for long-term investment and will produce properties for retention in their investment portfolios. The end user of the development is usually not pre-identified, except with pre-let. “They therefore tend to take less risk and in many ways are more ‘boring’ than developer traders” (Harvey (2004), p. 39).

Those holding large investment portfolios may handle the overall corporate projects and finance portfolio carefully and are therefore able to manage reasonable development risk. If they encounter a bad year or poorly performing project, they can take the loss and wait for the market to prosper again. New and smaller developers may choose to specialize and limit their exposure to only a limited number of property types to reduce risks and

maximize returns. They generally can obtain only project-based loans and have to let the banks check their accounts (Fisher (2005)).

Generally, the commercial markets including offices and retail establishments are usually developed and owned by larger companies who possess more resources. As for the residential market, a range of small to large size property companies may engage in the development. Traditionally, few will engage in both residential and commercial markets, although this is less so now. There are developers who change their focus from one kind of development to the other. In this respect, (Harvey (2004), p.40) stated that “there are also commercial developers who move from being traders to investors and back again according to market conditions and opportunities.”

Adair et al. (1999) conducted a survey on evaluating investors’ behaviour in urban regeneration and revealed that the major motives for engagement in regeneration projects include the expected total returns, risks of the investment, opportunities for new business, and track record in urban regeneration. Their main criteria for evaluating the viability of urban regeneration projects were capital appreciation, rental growth, and perceived level of risk, whilst other factors include land and construction costs, availability of Government subsidies or grants, the quality of the development and the neighbouring environment and the long-term viability of the project.

Their analysis is in line with the general thinking that developers will price different development opportunities and assess whether each is preferable according to their objectives when deciding on whether to take on a project. In most cases, they would assess if the development would be profitable and the level of risk involved.

Landowners

For both their functional and behavioural aspects, landowners can be divided broadly into public and private landowners. Public landowners include :

- (a) quangos and public companies; and
- (b) Government (e.g. the hospital and public housing land they hold).

Quangos

This group of public landowners controls a large amount of land and thus together they are highly influential. However, they are generally not active in the development cycle. There are exceptions though. The Housing Authority and Housing Society in Hong Kong own land vested in them by the Government for developing subsidized housing. Some private utility companies which were previously part of the Government have been privatised and own sizeable landholdings. An example is the Kowloon-Canton Railway Corporation¹⁶ which is now operated by Mass Transit Railway Corporation (MTRC).

Private landowners are diverse in origin. They may be developers holding land for development purposes, institutional investors holding land as an investment, or corporate and industrial landowners including those publicly owned corporations such as utilities companies. In the past, they were more passive and would dispose of their excess properties upon the winding up of their business. Nowadays, after privatisation comes to the core, they have become more active, finding investment opportunities for the land holdings and making a profit by selling and buying at the right moment (Guy and Henneberry (2002), p.138).

The position, objectives and origins of the landowners will determine how they perceive risks and appraise them. For those actively involved in making an investment of their land holdings, or even directly engaging in development, their appraisal of risks and assessment of viability will be similar to those of developers. For those not so involved in the development cycle, they may not conduct regular appraisals.

Government

Government in HK may often be seen as having the potential to take more risks as they are not subject to the need to make profits. Their major objective is to step in when the market fails. An important point is that failure of the market to develop should lead us to expect low returns on public sector initiated development. Nonetheless, the need to be

¹⁶ On 2 December 2007 the Rail Merger Ordinance came into effect and empowered KCRC to grant a service concession to MTRCL and expanded the scope of MTRCL's franchise to enable it to take up the operation of KCRC's transport services and to purchase the properties of KCRC.

accountable to the public coupled with the budget cuts requiring Government to be accountable for their expenditure mean that Governments are also more cautious and more rigorous in their appraisal of risks. It is still fair to say that Governments will sometimes not act according to risk as they have other objectives such as bringing about improvement to the community that are not measurable by profit-making alone.

Public and the community, as well as Green Groups

The general public, the community and Green groups may not appear in any stage of the development process of a property developer. Nonetheless, they may stage objections or provide comments during the planning and design of a project thereby affecting the ease of getting Government approval such as planning permission, and therefore prolonging the timescale of the development, adding to the risk of a scheme.

3.5 Property Development Process

Miles (2000) pointed out that “development is an idea that ends in bricks and mortar.” Development often starts with an idea on realizing the intrinsic value of a piece of land, building on it or using it to raise its the value. The aim is for positive economic returns. The idea may spring from a favourable economic outlook, a change in demographic structure such as an influx of a population, or an injection of Government spending into an area in the form of say infrastructure provision.

According to Harvey (2004), there are six main types of development :

- (a) new build – development on previously undeveloped (greenfield) sites;
- (b) new build – development on a previously used (brownfield) sites;
- (c) redevelopment – demolition – clear and new-build of a functional and similar building;
- (d) redevelopment – partial demolition and thus partial new build;
- (e) refurbishment – retention of existing structure which is renewed or rebuilt; and
- (f) conversion/change of use – existing structure substantially retained but for different use (e.g. from office to residential use).

In Hong Kong, according to the Town Planning Ordinance (Chapter 131, Laws of Hong Kong), development means :

“carrying out building, engineering, mining or other operation in, on, over or under land, or making a material change in the use of the land or buildings.”

Development according to the definition, which is based on the British Town and Country Planning Acts, has two main strands. The former refers to construction and operations on land. This includes building of houses, residential flats, office blocks or other forms of building such as shopping malls or convention centres. The latter refers to deploying a piece of land or property for certain uses, even without any building construction. For instance, the use of land for open storage of construction materials, parking of containers or other vehicles and open-air recreational use.

Certain processes have to be completed to facilitate a development. According to Tang (in Poon (1998)), practitioners and scholars conceive the development process differently in that scholars create conceptual models to investigate the factors and relationships influencing property development activities. These models are usually relatively abstract and depict the major concerns under research. For practitioners, the development process is a checklist and tool for identifying the major tasks that need to be accomplished to complete successfully the development project. It is usually an identification of the key stages of activities essential to the completion of a development. The flow charts are usually technical but easy to follow.

There are different approaches to understanding the development process. Healey (1991) grouped four models of development processes which have been put forward since the mid-1950s :

- (a) Equilibrium Models – derived from neo-classical theory and assume development activity is structured by effective demand and supply, as reflected in rents, yields, etc.
- (b) Event Sequence Models – derived from the estate management needs of the development process. It focuses on the management of the stages in the development process.

- (c) Agency Models – behavioral or institutional approaches by academics to understanding actors in the development process and their relationships.
- (d) Structure Models – derived from urban political economy and examine the dynamics and forces shaping relationships in the development process.

However, this research is looking at the developers' perspective. The event-sequence model of the development process is adopted in this research for a step-by-step understanding and unravelling of the risk and management methods in the development process. It is outlined below and derived from Cadman (1995) and Harvey (2009). The essential elements of which includes (Cadman (1995)) :

- (a) Evaluation : selection of a suitable site
- (b) Preparation : design and planning
- (c) Implementation : acquisition of land and properties, provision of infrastructure, financing and funding of the costs, and
- (d) Disposal : the disposal of the development.

The key components in the development process are as follows (Harvey (2009)) :

- project inception/site identification
- land acquisition and assembly
- project appraisal and design
- financing
- sensitivity analysis
- project execution/construction
- disposal

- (a) Development inception

The process of redevelopment starts with the private property developer conceiving a project. Whether or not development will take place largely depends on the developers' calculation of the profitability of a redevelopment project. They calculate the returns from the redevelopment against the costs of the land and building together with the construction costs and the risk they have to bear. The developer therefore is an entrepreneur who bears risk and makes a profit.

(b) Site Identification and Acquisition

Land is a vital factor, without which no real estate development can materialize. The first step is therefore to acquire a suitable site for the intended use at the right price. Depending on the location, this can mean the biggest financial commitment, such as in the context of Hong Kong where many academics and practitioners have said that the Government adopts a high land price policy (Shih (2004), Li (2006), The Professional Commons (2009)) when selling land to developers. In 2004, the revenue from land sales and other related income amount to 40% of its annual revenue income (Shih (2004)).

In land use decisions and property development, many people say that the most important attribute would always be ‘location, location and location’. In fact, timing and product are also essential. Timing will be explained in the section about the development cycle in this chapter. What if a developer gets a prime site but only builds on it when the market slumps and sells at a lower point in the economic cycle?

Product is also important. Developers will differentiate and therefore allow them to reap greater consumer surplus. The luxury sector is one example. Some developers in HK spend lots of money on high-quality construction materials and finishing just to differentiate their products to sell at a higher price.

On the subject of location, although land is fixed in supply and immovable, the economic activities that generate the demand for it may only arise in certain locations. Banks and financial institutions require city centre locations where accessibility and proximity to Government and other commercial institutions is easiest. Retail uses also need easily accessible locations. Factories and supermarkets need sizeable space but this can be in out-of-town transport nodes. Site constraints such as the need to overcome topography, site configuration and the provision of roads, transport and other infrastructure, including sewerage, water supplies and electricity are important too. Physical conditions aside, land matters including the lease terms and conditions need to be attended to. Approvals from Government authorities, such as on building and structural safety and environmental requirements and on planning permission, are also important.

Once a suitable site is identified, developers will start to assemble and acquire the land or properties. A prudent practice would be to obtain planning permission and resolve any legal issues before the site is acquired.

The acquisition and assembly of land at a sustainable cost and accountable timeframe are essential to the success of a development project. Land acquisition may be achieved through sale and purchase in the market or by private negotiation.

(c) Project Appraisal

Project appraisal and design, including ways of financing a project, have to be undertaken early in the development stage. Tang (in (Poon 1998)) identified three dimensions of feasibility – physical, financial and legal. Physical feasibility assesses the technical aspects, such as land form, location, site conditions, neighbourhoods, geological and landscaping aspects. Financial feasibility examines the monetary costs and returns of a project and the way it should be financed. Legal feasibility refers to the requirements under law or administrative practice of the relevant public authorities and whether they could be met without adversely affecting the returns.

Regarding financial appraisals, the best estimated costs and returns for the proposed redevelopment will be assessed. Costs include building costs, professional charges for architects, surveyors, planners, lawyers, letting agents, and in-house staff. It may be relatively easy to predict the trend of costs, but very difficult to predict what the market rent and yield at completion will be when the first appraisals are done usually at the commencement of the project (Cadman (1995)). Even costs may be hard to predict accurately in times of high inflation.

It is worth noting that each location and project is heterogeneous. There is a shortage of comparable information for similar types of development in the property market where transactions are relatively fewer than what is expected of a perfect market. As such, subjective assumptions will be made by valuers and decision-makers on the variables to be input to the appraisals. Smoothing¹⁷ of the figures will inevitably be adopted in the

¹⁷ Smoothing here refers to what Diaz described as ‘appraisal smoothing’ and is the ‘label ... applied to the observation that appraisal based return indexes exhibit significantly smaller variability than transaction based indexes. Appraisal-based return series are generally constructed using reappraisals. (Diaz (1999), p. 330’.

appraisals (Diaz (1998); Gallimore (2004), p.337). The appraisal of development schemes is therefore not as scientific as it should be. Harvey (2004) pointed out that the results of the appraisals depend very much on the intuition, experience and judgment of the valuers and decision makers. Take for instance, impact studies conducted by both sides in planning disputes are often very different though they are based on the same facts for the same development.

(d) Financing the development

At this stage, the developers need to answer questions such as how and from where does the finance come? What kind of funding will be involved? Are there any other taxation matters that need to be taken into consideration?

Developers have to choose between using their own capital or raising capital from banks or the stock market, or forward sale to financial institutions. Capital will be needed starting from when the decision is made. The opportunity costs foregone and the interest rates for the capital borrowed will be added to the budget. Capital raised may be in the form of equity or debt finance, project or corporate finance. Most developments involve a mix of different types of finance.

It is worth differentiating between debt and equity capital as well as between corporate and project finance as well as debt and equity finance. Figure 3.8 below shows a matrix explaining the relationship between these elements.

Funding Matrix		
	Corporate Funding	Project Finance
Equity Finance	Share Issues	Partnership Funds Single Asset Utilisation
Debt Finance	Loan Stock Fixed Interest Debentures	Bank Overdrafts Short-term Funds for Development

Figure 3.8 Distinction between Equity and Debt Finance as well as between project and corporate funding (from Issac (Issac 1996), Box 8.1, p. 157)

Equity finance refers to “money and resources provided by the developer, partners, investors and funds who participate in the risk and profit of the scheme” (Issac (1996)). It provides investor with a claim on capital gains, but the holder is exposed to risk if failure occurs (Adair (1998), p.59). Debt finances are loans related or not related to a specific project. They are raised from banks or other sources, including from the market. It gives lenders rights to payment but normally no share in the potential capital gain (Adair (1998), p. 59).

Project finance is finance backed by the project, other guarantees or additional collateral. Corporate finance is not related to any particular project but is finance raised with the backing of the corporate asset. This differentiates some developers who “have the financial muscle to raise corporate finance from those who rely solely on project specific finance” (Adair (1998), p. 59). Table 3.9 below from Darlow (1987) gives a simpler categorisation of the differences between debt and equity financing.

Tax./grant incentives	Debt based methods	Equity based methods
Tax based methods :	Ban loans	Disposals
Capital allowances	Overdrafts	Forward funding
Enterprise Zones	Bridging loans	Forward commitment
Superannuation Funds	Term loans	Project management
Finance leases	Non/ltd/recourse loans	Outright sale
Business Expansion Schemes	Syndication	Joint ventures
Property Unit Trusts	Revolving credit	Partnerships
	Mezzanine finance	Joint Venture Company
Grants and Subsidies	Multi-option finance	Tenants in common
City Grant	Mortgages	Venture capital
Urban Programme	Interest only	Sale/lease and leaseback
City Challenge	Bullet payment	Top slice (horizontal leases)
EC Grants	Annuity certain	Side by side (vertical leases)
Industrial Development Grants	Balloon	Reverse leaseback
Historic building, conservat and repair grants	Endowment policy linked	Finance lease
	Full pay back	Corporate paper
	Equity participating	Ordinary shares
	Corporate Paper	Preference shares
	Debentures	Right issues
	Corporate bonds	Convertibles
	Deep discount bonds	Warrant issues
	Eurobonds	Retained earnings
	Commercial paper	Securitization and unitization
	Loan stock	Billingsgate model
		PINC
		SAPCO

Table 3.9 Sources and techniques of finance. From (Darlow 1987).

Financing of the development can be very risky, with costs fluctuating over the course of the development. According to Harvey (2004), the major risks concerned with finance are :

interest rate fluctuations; project over-runs; withdrawal of the lender's support; and incorrect forecasting of future values or cash flow. Any change in the scheme, market demand and supply, government legislation affecting the scheme, and the difficulty in disposing of the property will lead to increased risks. To minimize the impact, risk reduction methods can be employed. However, the type used varies depending on the situation.

(e) Sensitivity Analysis

Sensitivity analysis tests the risks involved in a development project. As mentioned, project appraisal assumptions are subjective. There is thus much risk involved in making decisions based on these appraisals. In contrast, precision is required in making property development decisions which usually involve large amounts of capital. To deal with this dilemma, sensitivity analysis is undertaken to quantify risks. It measures how sensitive certain variables are to changes in the development scheme and the external and macro environment. These analyses will also measure the extent to which change in each of the variables would impact on the proposed development, both positively and negatively.

(f) Project Execution / Construction

Project execution/construction is a daunting task involving many parties. At this stage, the detailed design and development parameters of the project will have been confirmed and the actual building activities will then commence. Development teams will be set up to integrate and coordinate different actors in the construction.

(g) Construction

After considering feasibility, the implementation of the project is important. This is the stage of construction. Care should be taken to monitor the expenditure, the timing of commencement and avoidance of any delay in completion.

(h) Disposal

Disposal refers to the marketing, sales and/or leasing of a development. If the development is retained as an investment, suitable management of the investment properties is also needed. If the development is to be sold to the market, sale agents'

expertise will be drawn upon. Disposal of the land for sale, whether for investment or occupation are important decisions.

3.6 Main Risks of Redevelopment Schemes

Byrne (1996, p.8) defined uncertainty as :

“anything that is not known about the outcome of a venture at the time when the decision is made” whilst risk is “the measurement of a loss, identified as a possible outcome of the decision.”

Therefore it is difficult, if not impossible, to predict the outcome and little can be done about it, except to take out insurance. In contrast to uncertainty, risk however is measurable and precautions can be taken to “eliminate” and “mitigate the effects of risks when elimination is not possible” (Millington (2000)). Risk is the measurement of the probability of the outcome and the spread of possible outcomes according to their definition.

Probability refers to the likelihood of an outcome occurring. An objective measurement would be to count the frequency of similar events happening in the past. However, it may be difficult to formalize the interpretation of what constitutes similarities and whether the past trends of events can be measured or not. Added to the difficulty is the subjective nature of probabilities if there were no similar past events. In other words, risks may not necessarily be measured in actual terms (or monetary terms) but may merely be perceived. In that case, subjective judgment and a person’s experiences will be counted on to derive best estimates. Different people may have different views on the probability of each event and therefore make different choices. For instance, if a treasure hunt were to be carried out in an area, the person with local knowledge would be in an advantage. He may assume a higher probability of treasures being in an area due to his personal local knowledge. And in the case of property development, a local developer will have better knowledge of the local property market and will know the location well. He will consider redevelopment of say a run-down area worth the risk due to the recent gradual changes in the area brought about by initiatives of the regeneration quango. It may appear that an improvement in the fortunes of the area’s property sales is about to happen. In contrast, a national developer may not have followed the local news so closely and may therefore consider the risks of

the redevelopment higher than assessed by the local developer. The two will therefore attach different risk premia based on these measurements of probability (Adair (1995, 1998 and 1999)).

Decision makers, who are producers, will maximise their returns. They in fact are also consumers in the property market making purchases of potential redevelopment schemes. As consumers, they will maximize their expected utility, with the associated probabilities serving as weighting factors. Nonetheless, people differ in their preferences toward risks. Risk-averse persons will try to avoid risk. They would prefer a certainty in the return of a given amount to a risky investment whose expected return is the same amount but with the variance larger, i.e. the possibility of a higher returns. The marginal utility to this person diminishes as income increases. Risk-loving persons would prefer to gamble with the possibility of higher returns as opposed to the certain, but lower returns. The marginal utility to this person rises as the possibility of future income increases. Risk neutral persons are indifferent between certain and uncertain events with the same outcome. The maximum amount of money a risk-averse person would pay to avoid taking certain kinds of risks is the risk premium.

3.7 Risks in the Development Process

Following on from this summary of the development process, the risks in each stage of the process will be discussed. They can be :

- (a) An unexpected increase in costs, e.g. a rise in interest charges, acquisition costs, construction costs;
- (b) An unexpected decrease in revenues, e.g. at times of economic downturn, an outflow of institutional investments which would decrease the demand for properties, or a detrimental change in consumer demand;
- (c) A longer and more difficult redevelopment process : e.g. they may be unable to change land use to be in line with current market demand; lengthy land assembly process, miscommunication with the Government, poor partnership with joint venture developers, or dissent in public views delaying each stage of the process;

Development projects can span a period of a few years. Uncertainties and the ability to manoeuvre fade during the course of redevelopment. The developer gets a clearer picture as the redevelopment progresses but the flexibility to make amendments decreases. Besides, development appraisals can only set out the best estimates of a project and the actual costs and returns cannot be easily determined at the outset. There are many uncertainties, including project overrun, a rise in the interest rate, a downturn in the economy and change in consumer tastes and thus market demand.

Take building costs as an example : they may be very different at different stages of the development process. Building costs may be estimated at a low level when bidding for the land but raised, due to high inflation, to a very high level when tenders are invited or over the duration of the construction. Besides, construction may significantly overrun and adversely affect the budget and time for completion. The form of construction contract also implies a risk-share, i.e. the contractors may or may not be able to pass on the inflation.

The development value, including the rent levels and investment yields, is hard to estimate even close to the final appraisal just before construction. This again is because it usually takes several years from inception to completion of a building. Whilst the estimated returns will first be calculated since day one when decisions were made to go ahead with the development, the actual payment is only determined when letting and selling is conducted nearer the end of the development process. The fluctuation of development value is usually larger than the inflation in costs, depending on the economy and the market conditions. As such, the estimation of development value is most difficult and involves the most risk.

Take rental returns as an example. To avoid the uncertainty in the future rental (i.e. at the letting and selling), today's rent is assumed. However, even "estimating today's rent is a form of prediction" (Morley in Guy and Henneberry (2002), p. 78) as direct comparison may be hard to find in the heterogeneous property market where each property is unique and where transactions are few and in the relatively distant past. As such, the rental level used is only a best estimate or a forecast of today's rent. Some developers may undertake pre-let as a control on risks, but at the cost of lower returns.

Very often, investors are reluctant to invest in run-down areas or the redevelopment of older districts as these areas are stigmatized as yielding negative returns, riddled with high

risks, high transaction costs, low demand and a poor image. Indeed, small value projects usually “carry a disproportionate management cost” (Mitchell (1997), p.12). Investors tend not to become involved. Worse still, most of the tenants may find it hard to make a living through their small business and may fall out of business easily and bring the area’s image down time and again. The market reality in run-down areas including weaker tenancy and lack of information on the performance of these run-down areas result in private investors generally lacking confidence and consequently the demand for land and properties is low. Investors therefore raise the risks premium for these areas. There is an “absence of a weight of institutional equity capital in regeneration areas” (Adair et al. (1999, 2003 and 2005)). This results in reluctance by developers to engage in development activities in these areas

In contrast, on the supply side, land and properties are primarily determined by land-owner inertia and land-owner ‘hope valuations’¹⁸. The market therefore does not come to an equilibrium at specific demand.

As Adams et al (2003) pointed out,

“problems constraining property development in inner-city locations stem from the inefficient operation and imperfections in the land market¹⁹. Regeneration area land markets operate at a partial equilibrium where supply and demand do not automatically equate at a certain price (p. 1066).”

To facilitate the functioning of these land markets and to restore equilibrium, the state has to act as a critical actor in “supporting the development process and moderating adverse externalities, safeguarding social needs and conserving resources and environmental heritage” (Adair et al. (2003) p.1066).

As set out in previous paragraphs, the development process starts with the site identification and acquisition stage. Uncertainties at this stage are associated with the land which is usually the single largest capital outlay for the whole development. The

¹⁸ Hope valuations mean landowners’ expected values for a development taking into account the owner’s own wishes and the possible redevelopment value. This is usually inflated and deviates from the market value.

¹⁹ Imperfections in the redevelopment sub-market mean that the criteria for perfect competition does not exist in redevelopment market which involves heterogeneous products and there are limited number of buyers and sellers; transactions and sales data are few, especially for large-scale redevelopment schemes.

uncertainties include the physical characteristics of the land, the tenure or the legal conditions attached to the land and the planning permission given on the land.

The last part of the development process is disposal of the development as an investment. At this stage, the returns are in terms of rent, or investment yield for commercial development because commercial establishments pay rent rather than capital sum so that occupiers' capital can be more profitably used in businesses where they are experts. Therefore, there is a separate investment market for property. Investment yields²⁰ on property therefore relate to yields on other investment.

For the residential market, since it caters mostly for owner occupiers, it is common for occupiers to pay a capital sum outright. Therefore, they use capital price for residential properties. The level of returns may not meet the developer's expectations in a volatile economic environment. This is because development takes a long time to complete and once the development is completed, it is fixed in time and space. When there is an economic downturn, the rentals and capital returns of the property will diminish.

It is worth pointing out that in all the variables mentioned above, time is an important uncertainty that cannot be measured or controlled. However, it will add tremendously to costs and affect income in bad times.

It is therefore pertinent that the developers identify and be prepared for the risks in their projects. This would help to "make more informed and measured decisions about their projects" (Byrne (1996), p.5).

3.8 Land Use Planning as Risk

Planning has long been recognised by developers as a kind of risk, in the way that it delays the development process and adds uncertainty to the feasibility of a project beyond the technical aspects such as construction methods.

²⁰ Yield reflects a number of factors, including interest rates, location and type of property, future rental growth, tenants' covenant, obsolescence, size of investment and so on (Guy and Henneberry (2002), p. 80).

Cheshire (2005) explained that land use planning policy on urban containment in the UK has restricted the supply of land for all land use classes. He also explained how zoning in the US has restricted the supply of land for housing. Both led to inflated land prices rapidly as compared to housing prices. He based his reasoning on data of prices of land and properties for different uses. This raised an interesting observation that both certain and uncertain planning systems can increase prices.

Due to the existence of market failure to a certain extent in the land and property markets, there is a need for the provision of public goods and for the Government to step into the market to reduce externalities. However, Cheshire argued that planning, particularly in UK, dealt only with the notion of “need and physical units”, whilst “(suspicious) of any financial incentives, speculation and profit motive”. The consideration of supply and demand carries a lower weight. In terms of supply of land, planners are concerned with land released by government rather than land available for development in the market. If landowners anticipate that the supply of land will be restricted in future, they will withhold putting their land up for sale in the market in anticipation of higher future land prices (Evans (1983); Neutze (1987)). On the demand side, the planners’ projection of say housing demand are based on household formation rather than on the increase of household income. Cheshire cited a large number of ‘hedonic studies of housing markets’ which supported the argument that housing land prices are income elastic rather than a function of household formation.

A side issue is that the increase in land prices is much more rapid than the increase in house prices because houses are composite goods and attributes for houses can be substituted. For instance, developers can decrease the average flat size of each unit to increase the supply of flats. More floors can be added to a building, or detached houses can be sub-divided into semi-detached, terraced houses or even flats. Evans (2005) thus argued that planning, through restricting supply, would raise prices and densities.

Cheshire contended that relaxation of land use planning regulations would be necessary to eradicate the risks associated with land and property price distortions in some cases. In line with the deregulation of the capital and labour markets globally, it is anticipated that loosening of planning regulations on the supply of land is possible in the long run. This is

partly to provide cities with an edge in the competition against other cities under globalisation by lowering one of the major production costs - land costs. It is also partly due to the need for a better grip of national monetary policy. Rising land and house prices will lead to wealth effects increasing asset prices and local consumption, and loosening the government's impact on the real economy by setting the direction of interest rates according to the housing market rather than the wider economy.

Less restrictive planning policies, nevertheless, would increase risk for current and prospective property owners as well as investors. It is an unpriced risk which professionals engaged in the real estate investment and development industry are not aware of at the moment. Gibb (2003), when discussing the housing market, also commented that "a relatively strict planning system does imbue the housing system with a degree of certainty that reduces risk." This means that restrictive planning policies can create certainty to the market.

Cheshire (2005) anticipated that there would be constraints and obstacles to such deregulation as there is "powerful" "inertia in planning regimes" as "homevoters" who are homeowners and voters affecting the planning policies of government have a powerful influence on the decisions of Government on any relaxation of planning restrictions.

Bramley (1993 and 2005), on the other hand, in relation to estimating supply elasticity argued the notion that planning restricts supply is only assertion in some published studies because "the characteristic economic tools, the macro models, contain no explicit sub-models or variables relating to planning and land supply...Nobody has convincingly quantified the impact of the planning system on housing output and house prices overall and across different types of area" (Bramley, 1993, p. 6). They argued that even without planning, supply of housing land would not be completely elastic. They also contended that, "planning, by reducing uncertainty, increases supply (Bramley (1993), p. 7). Previous works by Bramley and Watkins confirmed 'the low supply elasticities and estimates that system-wide changes in land release would impact on house prices with an elasticity in the range 0.15 to -0.30. It is therefore concluded that planning might in practice have been quite responsive to market pressures, especially in the 1980s' (Bramley (2005) , p. 2215). Bramley's research in 1993 partially confirmed the view that "higher prices and price risks do give rise to slightly more land release, but mainly because developers apply for more permissions" (Bramley (1993), p. 27).

3.9 Perception of redevelopment risks by different types of developer

Fisher et al. (2005) conducted research on the risks of office development. They issued about 200 questionnaires obtaining a response rate of 32% i.e. 63 useable survey forms returned. They studied risks of development in two stages, namely the first feasibility stage and at the time of the survey.

In both stages, the results showed that the following were the major perceived risks. There were four choices for respondents : major, real, minor and nil risks. The figures in brackets showed the percentages of respondents considering the risk factor to be major or real risks.

- “rental value and incentives” (86%); and the
- “letting market” (85%);
- “investment market and yields” (78%).

In contrast, the respondents’ perception of the significance of the following as risks fell sharply at the time of the survey :

- “building procurement, cost and overruns”;
- “debt finance and interest rates”;
- “site or building condition including contamination”;
- “site assembly and purchase”; and
- “planning”.

Letting and market conditions and the related issue of timing of the development are important factors determining whether there will be a profit or a loss on the project. There is a long time frame for a development from inception to completion and the risks associated with the change in demand and market conditions are significant.

The lease terms specifying the rent level will usually last for several years. This, together with any incentives necessary to attract tenants determines the income stream of a developer/investor. The income stream in turn determines the sale value of the whole office development. Here, the factors of “investment market and yields” also affect the level of rent. As such, rental value would be pivotal in determining the returns of an office

development, and yields and the investment market condition would determine the sale value of the project.

It is noteworthy that the three major perceived risks mentioned above are in fact inter-related and related to the general economy and the demand/supply condition of a certain use.

Planning consent is considered one of the risks factors but its significance is much reduced once construction starts. The reason being that planning issues should have been resolved once the site is purchased. However, information collected by (Fisher et al. (2005)) confirmed that

“there was a strong consensus amongst interviewees that planning permission had become much more difficult, expensive and time consuming to obtain in recent years”.

As for the reasons for the sharp fall in the risk significance of the second batch of factors, (Fisher (2005)) remarked that :

“for most projects, construction was either complete or well under way by ‘current’ stage”.

As such, most of these factors would have been resolved to a large extent by then, i.e. at the time of construction.

3.10 Conclusion

The risks of redevelopment in theory and practice have been examined in this chapter. The focus has been on developing an understanding of the property market and the actors in it. The neo-classical theory that explains how the market arrives at a transaction price for a piece of land or property and when redevelopment would be materialised in a market context has been examined. This chapter also discussed how developers, as consumers, decide which plot of land or property to take up. Such analogy is logical as buyers of land, developers are consumers. However, there are weaknesses and possible criticisms in that the costs of land are usually transferred to buyers of properties and that developers are also affected by the market demand or property buyers' preferences. As such, they are buying on behalf of the final users instead.

This chapter discussed the neo-classical economic theory explaining demand and supply factors, then examined the property market characteristics, demand and supply as well as the development cycle. It was then narrow down to the risks of the redevelopment process as well as individual developers' risks profile. This assisted in an understanding of the wide array of factors affecting redevelopment risks, from macro down to micro. The question now remains in understanding other theories explaining firms' actions, including institutional and behavioural theories, and methods developers use on site bids.

The coming chapter will further discuss how development appraisals are undertaken which explain the developers' and firms' choices of redevelopment project. Though neo-classical theory gives a good basis for a neat and useful understanding of the choices of developers, it has various limitations. As such, the behavioural approach to understanding developers' choice of redevelopment project will be discussed in the next chapter. This research will employ the behavioural approach and blends it in with neo-classical theory to understand the developers' project choice. A research tool called conjoint analysis will undertake this task. This will be discussed in later chapters.

Chapter 4: Developers' Risks Pricing

4.1 Introduction

In the last chapter, the neo-classical approach was discussed to provide a basic model of decision-making in the land development process. When demand (which is affected by utility) and supply (which is determined by cost of development) are equal, the market will be at equilibrium and development will take place.

This chapter is concerned about what developers actually do in a market environment. Developers try to minimize the impacts of development risks by different means. There is currently a gap in the understanding of how developers price and manage the risks of development/redevelopment. This chapter first expands on how decisions are made in a neo-classical context. It asks how developers value the profitability of a project, the pricing of risks of development and the determination of scenarios as well as sensitivity analysis in understanding the possible deviations from expected profits.

After that, the limitations of the neo-classical approach, especially the difficulty in forecasting due to the lack of accurate information and the sensitivity of the data for analysis are discussed.

The following section examines the behavioural approach to understanding developers' decisions, in particular, how most valuers and developers are affected by their perceptions and understanding of risk in forming their pricing studies. Some may resort to heuristics such as representativeness, availability and anchoring as suggested by Tversky and Kahneman (1979) in their Nobel prize-winning research. This may involve contacts and informal information to formulate analysis of the development appraisals as well as pricing strategies.

Lastly, the chapter will discuss choice/decision-making in the context of the firm and organization. The reason why some developers are risk-averse whilst others are risk-loving and how some are more successful in managing risk than others will be explained.

4.2 Neo-classical Economics

The market environment can be considered in three different ways : the neo-classical approach, the institutional approach and welfare economics.

The neo-classical approach assumes that redevelopment will take place when estimated returns from alternative uses exceed the value of the land in its existing use plus clearance, demolition and building costs (Adair (2005), p. 215). This chapter evaluates the relevance of the neo-classical approach to understanding developers' risks and management measures.

However, the market itself might not allocate resources efficiently. The property market may fail to come to equilibrium due to less than perfect information, infrequent transactions due to a discrepancy between landowners' hope valuations and investors' stigmatization of poor returns, and the heterogeneousness or uniqueness of each property. Negative externalities such as the stigmatization of an area, poor infrastructure, landowner inertia, obsolete design and poor security and safety in the area will increase uncertainty and deter investors and developers from engaging in new development in run-down areas that are in need of redevelopment and regeneration (Adair et al. (2003, 2005)). Against such a background, welfare economics proposes that direct state intervention is needed to solve the problem of negative externalities.

Institutional economics (IE) nonetheless contends that market failure does not arise merely out of "externalities *per se* but rather due to the existence of high transaction costs that undermine attempts to allocate ownership over such externalities" (Adams et al (2005), p. 41). If transaction costs are low or zero, any party may voluntarily agree on compensations and reach a transaction, thus market failure will not exist. Institutional Economics therefore challenges the usefulness of state intervention suggested by welfare economics.

4.3 Attitude towards risk

Chapter 3 sets out the risks of redevelopment. It showed how there are risks in redevelopment and why it was difficult to make decisions on whether or not to develop due to uncertainty of returns in the long term.

The appraisal of risks serves as a screening process, enabling the developer to decide in an “unemotional manner” (Hertz and Howard (1984)) by telling the developer how well or badly a project is likely to perform in terms of risks and returns. However, the figures and information provided alone do not help determine whether or not to take up a particular development. Such a judgment must depend upon the risk of the particular project, the firm’s total risk in the full portfolio of projects and other strategic factors such as corporate strategy (Hertz and Howard (1984)).

For this, developers undertake appraisals to price risk. They determine their risk attitude against the organization’s full portfolio of investment. They decide whether and how to spread this risk through assessing the risks and returns for the development against other development projects and investment options. Developers also take into account the organization’s position in the industry, the overall economy, the surrounding environment and the community. For instance, the reputation of the organization may be vital and a developer may trade-off part of the return for reducing the adverse risk to the company’s reputation.

The developer needs to make a judgment on the risk involved. He would make his final decision based on the rate of return calculated after taking into account sensitivity analysis, together with other investment options and intangible and unmeasured factors not considered in the valuation (Hertz and Howard (1984)).

Once risks are priced, developers consider whether to take on and manage the risk, pass on the risk, or abandon the project. Their attitude towards risk shows whether they are risk-averse, risk-loving or risk-neutral. Different developers have different attitudes.

The risks associated with development cannot be avoided even for the most experienced developer. Upon appraising the risks involved, developers should implement risk reduction and risk control measures. Millington (2000) quoted one managing director of a large property development company who said his major role was the evaluation and reduction of risk. Although risk may not be totally eliminated (as examined in Chapter 3), risk control is important.

The next chapter will discuss risk management. The remaining sections of this chapter examine the normative and behavioural pricing of risks by developers.

4.4 Developers' Pricing of Redevelopment Risk

Developers' Risk Pricing

As Adair (2003, p. 218) pointed out, risk can be defined as

“the probability that a target rate of return will not be realized ... whilst Property pricing (is) ... a form of investment decision-making (which) seeks to ascertain the present value of future income and expenditure flows.”

Real estate / development appraisal is ‘defined by the Appraisal Foundation of the United States as “the act or process of estimating value; an estimate of value”.... is an estimate of the value of the physical property and the rights of ownership associated with the property’ (Epley (2002), p. 101). There are value-in-use and value-in-exchange. Value-in-use ‘arises from an individual’s ability to obtain satisfaction or utility from the consumption of the product...Value-in-exchange arises when at least two persons recognize the value-in-use ...the owner of the commodity can then ask for something in exchange for the commodity if she chooses to trade with the other individual (Epley (2002), p. 79)’. Two conditions must be met for value-in-exchange, that the commodity must be ‘transferable’, able to be given from one to another person; and ‘must not be free good’ such as air and sunlight, i.e. relatively scarce and not possessed by everyone (Epley (2002), p. 79).

Like any other commodity, there is a value for each unit of the commodity. In the case of a barrel of oil, the value would depend on the utility derived from it, the production costs, i.e. the capital needed to invest in the extraction process and the scarcity of oil relative to world demand at the time of the transaction. Utility should not be different for different barrel of oil. To retrieve the production costs is to offset the opportunity costs foregone by the producer of oil and to encourage additional unit of production to come on to the market. The supply and demand condition would set the market price for the oil. It is worth noting that a unitary price could be reached and traded in the world market for a barrel of oil since each barrel is almost homogeneous to another. In such a competitive market selling a homogeneous product, the value and the price of a barrel of oil would likely equate to each other.

Quite unlike oil, there is no production costs for land, except in the case of reclamation which amounts to only a small proportion of the supply of land in most countries, and the costs required for servicing and providing infrastructure which are mostly borne by the Government. As for property, the production costs are related to the design, construction and marketing of the property. To calculate the value, one has to calculate the returns it would earn by putting that piece of land and the property into a particular use. Development are heterogeneous, so different developments, even those adjoining each other in the same location, can yield very different returns. Transactions in the market are relatively few and the lack of information impedes a perfectly competitive market. The price of development, though depending on supply and demand, is very often hard to predict.

In a simple appraisal, the developer needs to calculate the returns from the specific development, which depends on the development value and the costs of the development.

Development value is determined by the income derived, i.e. rent in property development, and the property's yield. The rental income derived depends on the supply and demand conditions for certain uses, i.e. the market conditions for such use. The property's yield depends on the investors' growth expectation, target return, rental payment and rent review period. On the other hand, development costs include that of land values, construction costs and finance charges. The costs of development depend mainly on the condition of the economy and the level of inflation.

As outlined above, all three elements of rent, yield and costs are sensitive to variables both endogenous and exogenous to the project itself. Most of the variables are outside the ambit of the developer, and often vary continuously along the course of the development process. Property development is therefore a highly risky business.

There is a plethora of valuation methods to identify, measure and price the main risks of redevelopment in each scheme. Developers would generally employ methods such as the following :

- residual methods;
- discounted cash flow analysis;
- sensitivity analysis;

- simulation;
- scenario analysis; and
- reliance on judgment rather than formal analysis.

The Royal Institution of Chartered Surveyors' *Appraisal and Valuation Standards* (RICS (2010)) also known as the Red Book is the appraisal guidance in the UK.

“Guidance Note 5 of the Standards outlines the principles for the valuation of land in conditions of uncertainty such as a development scenario ... (and) ... recommends that where the comparable method cannot be applied on a sound and rigorous basis, the residual approach should be adopted” (Adair (2005), p. 217).

This is because although ‘current price’ should be the ‘starting point’ for valuation, comparable evidence tends to retain historical values (Adams (1985)). Adair further reasoned that valuers often work with “secondary and incomplete information” as there is a “lack of expertise in valuing regeneration sites”. For instance, valuers did not appreciate “the full impact of contamination on property values until the Environmental Protection Act in 1990, scarcity of reliable data on regeneration projects, lack of information on rents and yields... the costs associated with remediation” and thus use ‘secondary and incomplete information’ (Adair (2005), p. 216).

What is the residual method?

The residual method is a way to assess land value. It calculates the estimated capital value of a development in its final use, usually the highest and best use, then deducts the expected development costs of the project, including the developers’ profit and his required return for risk taking, leaving a residue.

It can be expressed in an equation :

$$P = V - C$$

P – refers to profit

V – Development Value of land assigned to the highest and best use

C – Costs

$$S = V - C - P'$$

S – site value

P' - expected profits

Site value (S) depends on the use allowed on the site and the capital value. Capital value (V) depends on the rental and property yield and they are determined by market price, or the supply and demand of the developed property. Costs (C) incurred include the land costs, demolition and clearance, decontamination, provision of infrastructure, building costs, design and landscaping, professional fees, finance costs, letting and sale fees and the remuneration for taking on risk. Each of these elements also depends on “the size and content of the scheme to be appraised” (Morley in Guy and Henneberry (2002), p. 77).

Yield describes “the factor by which income, anticipated or actual, derived from a development is capitalised ... will depend upon the relative degree of risk involved, and the relevant investment yield will be adjusted accordingly” (Ratcliffe et al. (2009), p. 453). “Yield depends on the state of the economy and the general level of interest rates/yields, the type and the location of the property and hence its future rental growth expectations, the security of the income in terms of the tenants continuing ability to pay the rent, the life and obsolescence of the property, the management problems attached to rent collection, supervising repairs, etc” (Darlow (1987), p. 7). A development already completed and let will have a much lower yield. A high risk project with a high yield will be one for which there are no pre-let and rents are guaranteed for an initial period of only, say, three years following completion only. In this case, forward-funding with interim funding will provide a lower yield (Darlow (1987); Issac (1996)).

The calculation in the residual appraisal is taken at inception of project but the costs and income entailed span across the course of the development process. The residual approach will therefore result in a time-lag problem in assessment of costs and returns.

As shown in the formula in the last page, profit and costs are only estimates. (Ball (1998), p. 66) describes it as a “fiction, because within the calculation variables are artificially fixed whose values in reality are influenced by land prices.”

Cash-flow Approach

To ameliorate the problems associated with the residual approach developers deploy more refined appraisals, which are the cash-flow approach and the Discounted Cash Flow approach.

The cash flow approach is similar to residual valuation but a time series of cash flows, including income and expenditure will be calculated more precisely, usually at intervals, which may be in terms of months, in the development process. This approach allows more flexible estimation of income and expenditure at a future date, and may even allow for an estimation of inflation. It is particularly useful in calculating building costs and interest payments period by period and thus accommodates the changing economic outlook and interest rate movements.

An adjusted discount rate would sometimes be added to reflect the development in net present value (NPV)²¹. This will allow comparison of competing projects of different timescale. An internal rate of return (IRR)²² will be added which enables cross comparison

²¹ NPV in valuation is based on a given discount rate. It helps to determine the capital value of a project and explore its feasibility. Most developers employ appraisals with NPV approach and therefore NPV determines the market values and yields (Ratcliffe (2009), p.421).

²² IRR is the ‘rate of interest (or yield) which would make the NPV exactly zero’ (Balchin (1995), p. 144). It is the discount rate or rate of return derived from the cash flow approach and would equate total costs (excluding expected profits) to total capital value. It ‘reflects the scheme’s profitability relative to the actual incidence of costs and income’ (Darlow (1987), p. 79). It is employed to compare projects viability and decide whether a project is viable with the given opportunity cost of capital through comparing it with the rate of interest on borrowed money plus the degree of risk involved. The future cashflows are either known or can be anticipated. The advantage of IRR is the avoidance of an arbitrary and subjectively selected discount rate. However, it has weaknesses such as conflicting answers, multiple yields, is unusable if there are unconventional cashflows such as large negative payments followed by positive inflows. It is mainly deployed by larger developers and institutions.

of the rate of return with other investment type. A diagram explaining the relationship between NPV and IRR is illustrated in Figure 4.1 below.

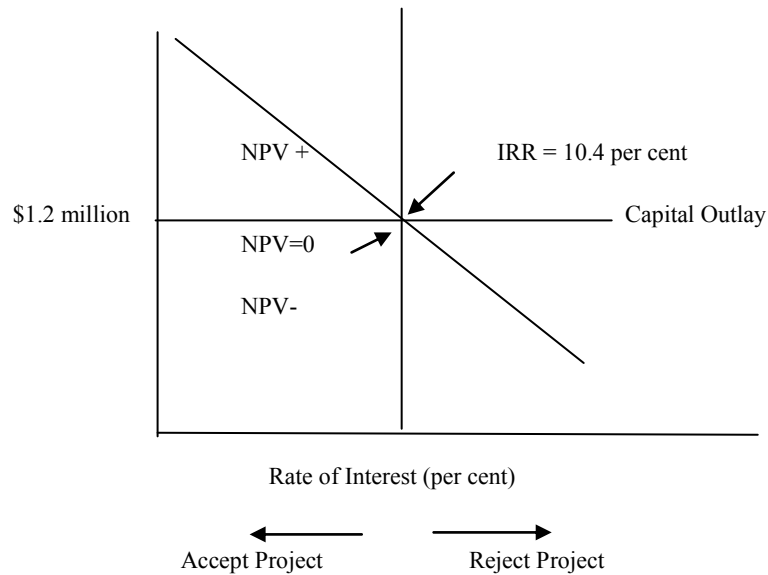


Figure 4.1 Present Value of income and expenditure (from Balchin (1995), Figure 5.1)

The cash flow approach is more useful for complex developments, i.e. those developed in phases and those where income and expenditure are irregular and spread over a period of time. However, for simple and straightforward development, schemes with a short development cycle, those with lower interest payments or where the appraisal is done at an early stage in the development process when everything is still very uncertain, cash-flow approach is not cost effective.

A caveat here is that for the cash flow approach and residual valuation alike, accurate information input into the assessment is pivotal. Without accurate and timely data, the more precise assessment of cash flow at intervals of the development process would serve only to make the appraisal even less accurate.

Even when refined and including the time-series data input, both residual valuation and the discounted cash flow approach are very static in nature since they abstract much of the risk of development associated with macro-economic changes and associated changing conditions in the user, investment and development sectors. The residual method is the worst in handling risks. The discounted cash flow method is an advancement but it concentrates very heavily on the period from land acquisition through to development. The

wider economic risks are normally dealt with in terms of sensitivity analysis but these are mainly concerned with the impact of a change in key development variables, not the likelihood of such a change.

Finally, it is notable that both the residual valuation and the discounted cash flow approaches concentrate on the period after land acquisition and are therefore not good at dealing with the uncertainty that derives from the planning system and the acquisition of development rights. So, this source of risk and uncertainty is not dealt with explicitly in the development appraisal process. This is a clear limitation.

Information Deficiencies

In addition to the above weaknesses, there are problems of information deficiencies and difficulties in predicting future figures which constrain the effectiveness of the residual valuation and discounted cash flow approaches.

Pricing of redevelopment may not be as straightforward. The different sources of information on costs and values for conducting valuation are limited, crude, not broken down to the needed level of detail, usually inaccurate and often outdated in a highly volatile property market (Gallimore (2004)).

“The limited availability and capriciousness of much property market data means that data issues often require critical forecaster attention (Gallimore (2004), p. 339)”.

Predicting development costs is more straightforward than estimating revenue. It can also be overcome by having a fixed cost contract. However, the development value including the rent levels and investment yields are hard to estimate even close to the final appraisal just before construction. As discussed in Chapter 3, it can take several years from inception to completion of a building. Whilst the estimated returns will be calculated at first inception, the actual payment is only determined when letting and selling is conducted nearer the end of the development process.

Predicting Future Figures

Developers, in predicting future returns, may take the current price, undertake formal forecasting by calculating probabilities, or extrapolation based on past trends.

However, there are drawbacks in each method. Developers who take the current price may miss turning-points in the development cycle and may thus be outbid by other developers. Those extrapolating future value from past trends may increase or even exaggerate profit expectations in times of boom. For those using formal forecasting, perfect foresight is assumed but this is unrealistic.

Sensitivity

Not only are the values of the variables hard to predict, some variables are more sensitive to external influences such as changes in the economy and the property market. Added to that is the severity of the magnitude of the changes. Some “variables exert a disproportionate effect on the residual answer” (Morley in Guy and Henneberry (2002), p. 92). Slight changes in these variables, which may arise from external inducements such as a change in Government policy or inaccurate estimation, will result in a wide range of different answers. A small change in one or several critical variables will have a disproportionately large effect. Rent, yield and building costs are generally considered the most important variables.

Such strong sensitivity led to many miscalculations of risk in the early 1990s in the UK property market, where many bankruptcies arose due to the sharp fall in land value as compared to that initially estimated.

In sensitivity analysis, the riskiness of the development scheme is tabulated and presented in figures. The aim is to help make a more informed decision through identification of key variables and the effect on the site value of changes in the individual variables. The standard deviation or magnitude of sensitivity, and the possible extreme figures are tabulated. In other words, it attempts to show what might happen to the developer's profit if market conditions change. It examines the sensitivity of the profit margin to find out which variable will exert the greatest pressure on the profitability of a scheme. Generally, rent, investment yield and building costs are the most sensitive variables.

A sensitivity analysis widely used by developers is adopted from Darlow (1987, p. 110) and illustrated in Figure 4.2 below.

Variable	Change in variable to eliminate profit	New value of variable (approx.)	Original Value of Variable
Rent	17.5%	US\$124 per m ²	US \$150 per m ²
Yield	21%	(office rent) 8.5%	(office rent) 7%
Building Cost	28.5%	US \$960 per m ²	US \$750 per m ²
Finance Rate	105%	(office cost) 29%	(office rent) 14% p.a.
Building Period	153%	3.75 yrs	1.5 yrs
Letting Period	295%	2 yrs	0.5 yrs
Pre-building period	953%	5.25 yrs	0.5 yrs
Land Cost	87%	\$2.4m	\$1.3m

Figure 4.2 Sensitivity Analysis (Darlow (1987, p. 110))

The problem with sensitivity analysis is that there may be “information overload, with numerous different residual answers obtained from a wide range of values for each key variable” (Morley in Guy and Henneberry (2002), p. 92). Besides, it assumes each variable will change in isolation but it is very likely that several variables will be changing all at once. The failure to calculate the result of the possible changes of several variables and the probability of this happening is another drawback.

This problem with sensitivity analysis can be overcome by scenarios to an extent. Scenarios are devised by developers to forecast the possible results, and “examine the effect of the occurrence of various permutations of circumstances” (Morley in Guy and Henneberry (2002), p. 93), i.e. changes in a combination of any of the variables, such as that of current/future estimated rent, costs, yield, capital value, rental growth etc. These can be further broken down, say, into the high, mid and low range of the current/future rent or costs. In simple words, scenario analysis shows the different scenario – optimistic, realistic and pessimistic combinations of variables and illustrates the overall impact on developers’ profits if market conditions change. “Professional judgment will be crucial in selecting reasonable estimates based on expert advice, good records and knowledge of the market” (Darlow (1987), p. 111). Figure 4.3 below shows a simple scenario.

Variable	Optimistic Scenario	Realistic Scenario	Original estimate	Pessimistic Scenario
Rental growth	7% p.a.	5% p.a.	-	3% p.a
Investment yield	6.75%	7%	7%	7.25%
Building costs increase	6% p.a.	7.5% p.a.	-	9 %p.a.
Finance rate	12% p.a.	14% p.a.	14% p.a.	16% p.a.
Building period	18 months	18 months	18 months	18 months
Letting period	no delay	6 months	6 months	9 months
Pre-building period	6 months	6 months	6 months	9 months
Contingencies	3%	3%	3%	3%
Land cost (incl. Acquisition costs)	1.35m	1.35m	1.35m	1.35m

Figure 4.3 Scenarios (from Darlow (1987, p. 111))

The problem with scenarios is that they take little account of the probability of the selected values of all the variables occurring together. Developers may therefore conduct simulation such as Monte Carlo simulation, which is a further refinement of sensitivity analysis and scenario analysis. Monte Carlo simulation is a probabilistic model which can tell developers the degree of risk in the project. To do so, the simulation will quantify the risks, using a “scale of probability ranging from zero (absolute impossibility) to 100% (absolute certainty)” (Darlow, 1987, p. 114). Though scenarios can accommodate such probability elements through a weighted average best estimate derived from a three point estimate, the problem is that it does not tell the spread of the risks.

There are three stages in Monte Carlo simulation. Firstly, the developer will define a full range of possible values for each variable from extremely pessimistic to extremely optimistic and estimate the likelihood (probability) of each value occurring (Darlow (1987), p. 118). Table 4.4 below shows a simplified probability table.

Variable	Range	Probability (%)	Probability numbers (out of 100)
Rental growth (rate of annual increase during development)	0%	15	1-15
	+3%	20	16-35
	+5%	40	36-75
	+7%	20	76-95
	+10%	5	96-100
Investment yield	6.5%	5	1-5
	6.75%	15	6-20
	7%	50	21-70
	7.25%	20	71-90
	7.5%	10	91-100
Construction cost inflation per annum	+5	10	1-10
	+6	25	11-35
	+7.5	40	36-75
	+8.5	20	76-95
	+10	5	96-100
Finance rate	12 p.a.	5	1-5
	13 p.a.	25	6-25
	14 p.a.	40	26-65
	15 p.a.	25	66-90
	16 p.a.	10	91-100
Building period	15 months	20	1-20
	18 months	50	21-70
	21 months	20	71-90
	24 months	10	91-100
Letting period	0	20	1-20
	3 months	20	21-40
	6 months	40	41-80
	9 months	15	81-95
	12 months	5	96-100
Pre-building period	3 months	20	1-20
	6 months	60	21-80
	9 months	20	81-100

Table 4.4 A simplified probability table (from Darlow (1987), p. 118)

Appraisal will then be undertaken with randomly selected values for each variable. A number between 1 and 100 is randomly selected and that value will determine which value will be used for that variable in the appraisal. The process will be repeated at least one hundred times and preferably up to one thousand times. This produces a probability distribution of a developer's return.

For instance, if the randomly chosen number in one round of the process chooses a probability for rental growth of 22%, Investment yield of 53%, construction cost inflation of 14% per annum, finance rate of 80%, building period of 42%, a letting period of 77% and a pre-building period of 68%, the following Table 4.5 will be displayed :

Rental growth	Investment yield	Construction cost inflation	Finance rate	Building period	Letting period	Pre-building period
+3%p.a.	7%	+6%p.a.	14%	18 months	6 months	6 months

Table 4.5 (from Darlow (1987), p. 120)

A series of say one thousand runs are conducted and may yield a profit of not less than GBP 0.6 million and not more than GBP 3.2million. The following Table 4.6 shows the usual histogram diagram for Monte Carlo analysis.

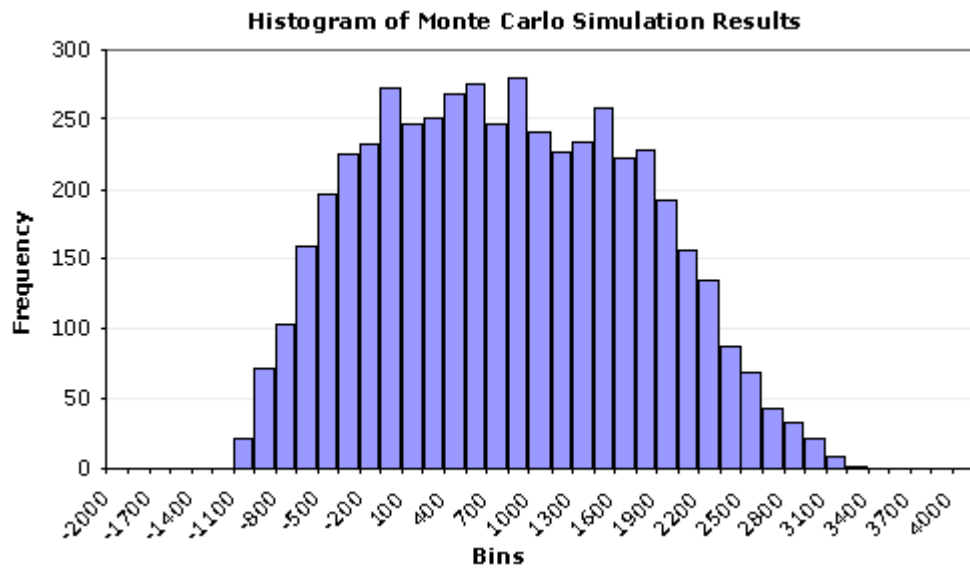


Figure 4.6 Histogram for Monte Carlo Analysis

For instance, before probability analysis, Scheme B may appear a better scheme with a higher profit level. However, with probability analysis, the spread of risk is higher than Scheme A and therefore may not be as attractive to some developers. It also brings in the notion of risk-loving versus risk-averse developers. The last section of this chapter will discuss these two types of developers.

Sensitivity analysis, scenarios and Monte Carlo simulation would not predict what will happen in future but make the possible impact of risk quite explicit so that developers fully consider the balance between risk and reward. The developer will then consider if the risk is acceptable.

4.5 Redevelopment Areas

Apart from the static nature of the development appraisals not taking on board, pre-construction factors such as the planning aspects, deficiencies in data and information provision, difficulties in predicting future figures and the sensitivity of the data to the development appraisals, it is worth understanding the imperfect redevelopment sub-market which will have an adverse impact on the predictability of the neo-classical approach.

Redevelopment areas suffer disengagement from investment and transactions and sales data are often few, especially for large-scale redevelopment schemes (Adams (1985) and Adair et al. (2003; 2005)).

Without frequent transactions in redevelopment areas, valuers generally employ dated values. Comparables become even more dated in such markets with thin transaction volumes.

There are differences in the provision of information between and within property sectors and location. Information is abundant for those in prime locations and sectors. Taking the UK as an example, there may be sufficient data on offices and retail property in London but that for secondary locations and developments such as a leisure development in the city of Hull are limited. Information on regeneration areas is generally secondary and incomplete, with potentially high volatility in values.

There are also “perceived risks associated with redevelopment in the inner city” (Adair (2003), p. 214) including contamination of inner city land, the “disproportionate management cost” due to the “weaker tenancy covenants” which means “higher yield” is required for these areas. At the same time, however, it is almost impossible for residual appraisal to allow “yield unbundling” (Adair (2003)(Adair 2003)(Adair 2003)(Adair 2003), p. 219). Besides, redevelopment schemes are often riddled with the problem of longer and extended lead time, which are hard to predict at the beginning of a development. As Adair et al. (2003) pointed out, higher risks are in most cases merely perceived.

Adair et al. (2003) also found out that

“detailed comparable evidence on large-scale urban regeneration schemes, was considered almost impossible to obtain (especially) where the proposed development is of mixed use or the site is contaminated” (p. 219).

Added to the problem is that the land values in regeneration areas tend to be volatile. There is a lack of expertise in assessing the value of these parcels of land. As such, the estimated price of land in these areas tends to remain high but unrealistic as demand in redevelopment areas has in fact been lowered substantially.

To complicate the valuation process, governments provide grant aids/tax allowance, engage in direct development and provide incentives. These may distort the normal operation of the property market, the demand for properties and also the resultant transaction price. All these mean that the valuation of redevelopment schemes requires a high level of expertise, full information, good judgment and reasonable allowance for contingency, sensitivity of variables and the risks.

The most widely adopted practice is to provide single point estimates, but the figure could be highly unrealistic due to lack of accurate information on rents and costs, and the sensitivity of the variables. To deal with the problem, some developers and valuers include “caveats warning of potential liability (or) along with a detailed explanation of the assumptions that have been made” (Adair (2003), p. 225). Some valuers may provide a range of values which others may simply provide professional advice without engaging in any valuation.

These constraints of redevelopment areas may not be completely applicable to the Hong Kong context. Expectations of hope value have been the main problem affecting redevelopment in Hong Kong. Landowners hope to accrue the land rent as far as possible. This may lower developers' profits, though the profits for developers are still large.

Although stigmatization may not be the central issue holding back redevelopment in some areas in Hong Kong, difficulties in land/property acquisitions, due to what some attribute to owners' hope valuations, have slowed down the whole redevelopment process mostly in run-down out-of-CBD areas. These lower the number of transactions in redevelopment

areas. Having said that, there is full provision of information as the Land Registry records all land and property transactions price and other data.

4.6 Behavioural Approach to Understanding the Decision-making of developers

The above explanation gives a picture of the normative (would be) models of decision-making of firms at the micro level. Gallimore et al. (1999, p. 604) summarised the steps developers undertake to come up with a decision in such normative models. The details are as follows:

- (a) define aims and objectives of a development;
- (b) comprehensive search for projects that meet the initial criteria;
- (c) formulation of a fully-defined strategy and criteria for the selection and assessment of property;
- (d) assessment of individual projects based on the criteria" in (c); and
- (e) reference to strategy of the company.

It can be assumed that strategic direction, target rates of return and risks levels are formulated to arrive at an 'objective', 'unproblematic' and 'optimal' decision at the right time. This is the infallible rational man construct and the efficient market hypothesis (Diaz (1999), p.327).

However, as commented above, the redevelopment market is less than perfect and developers often resort to secondary data and third person information for judgment. In fact, the normative model of decision-making itself may not reflect the full and true picture of real world operation.

Indeed, it is often thought that both investors and developers alike are rational in their decision-making, which is based on highly structured and formal calculations. Mitchell and McNamara (Mitchell (1997)) point out that even very sophisticated forecasting approaches can be affected by the judgment of an individual. They state that there are differences in the data and information employed, the build-up of the econometric models and the

statistical processes. As such, structural breaks in trends, unexpected events, deficiencies in data collection and differences in the structure of econometric models render model output unreliable and so forecasters resort to judgment.

Land and property markets are imperfect as detailed in Chapter 3 and more so for redevelopment areas as mentioned in a previous section of this chapter. Information provision in this market is insufficient for developers to make an informed decision and there are few buyers and sellers defeating the assumption of perfect competition. In this regard, the behavioural approach is relevant and assists in the understanding of how developers actually make decisions, the steps they actually take and the result that they arrive at.

From Gallimore et al (1999)'s depiction of the steps taken by developers mentioned above, it is apparent that the provision of sufficient and correct information would be pertinent to success in making the right decision. This would entail a substantial element of judgment from the valuation professionals and the decision-makers.

Apart from learning the normative models to form the basis of our analysis of developers' risk pricing and management, one has to gain a fuller understanding of their judgment through the descriptive analysis of their behaviour in a real market situation. It is necessary to distinguish between how decisions should be made from how decisions are made, i.e. their real choice. Diaz (1990a) and Diaz (1990b) pioneered this type of "behavioural property research".

"Behaviour theory suggests that decision processes are not fully rational and are subject to various heuristics and biases" (Gallimore, 1999, p. 604). Ball (Ball (1998), p. 212) has drawn up an account of developers' behaviour, which is very different from normative models. He summarized Antwi and Henneberry (1995)'s argument that developers are "habit persistent" basing their appraisals on past trends. He further commented, based on Galbraith (1990) that some developers also got caught up in "the mania of speculation" and possess what Keynes called "animal spirits".

Adams et al ((2005), p. 50, 51) also commented that

“a certain amount of conventional investment practice in the midst of widespread speculative behaviour can be attributed to the psychological need of individuals for continuity and sameness in all they are doing”.

However, ‘habit persistence’ may in turn lead to greater volatility in the property market. Past market trends suggesting the upward movement of rental returns may encourage more developers to overbuild resulting in excessive supply, or lack of capacity to return to equilibrium when there is a sharp downturn in the economy.

Though most literature in property development, which employed the behavioural approach, are related to understanding valuers’ behaviour in property valuations, there are some literature that deal with the decision making behaviour of developers. These include Gallimore et al (1999), Gallimore and McAllister (2004) and Fisher, P and Robson, S (2005). The literature on the behavioural aspects of valuation is relevant as it depicts the measurement of development risk by the valuation professionals serving the developers. The following paragraphs summarise these literature on the behaviour of developers.

Ball et al. (1998) remarked that “the behaviour of developers in the period ... (throughout the mid-to-late 1990s)... often exhibit[ed] unreasonable optimism of a quick return to market prosperity, eradicating rational decision-making.” “It has tended to cause escalating land prices and lead to a destabilizing effect upon the wider industry.” This has helped cause the property crash in Britain in early 1990s.

Developers’ sentiment in the property market may have a strong influence on developers’ decisions. Investors and developers are human beings and frequently act sub-optimally as suggested in behavioural psychology. Their decisions often deviate from normative models.

Diaz (1990b) indicate that valuers use systematic and efficient processes in selecting comparable sales, a strategy contrasted with the selection process expected generally from valuers which demands a lot of cognitive attention and is therefore less efficient. As the process is inefficient and non-systematic, it produces less than optimal and even biased results.

Due to the lack of adequate and accurate information, developers may resort to market or investors' sentiment in making development decisions. Such sentiment may come from :

“general market commentaries and the adoption of trading strategies, such as trend chasing”, “views such as personal feel for [the] state of [the] property market, experience, views of general economic commentators, publicly available forecasts of economic trends and property market trends” (Gallimore and Gray (2002), p.112).

The conclusion by Gallimore and Gray (2002) also includes personal networks as information sources.

According to Henneberry and Rowley (2002), developers may retreat to collect from informal, disjointed and sometimes outdated sources that include :

“direct experience from recently completed schemes; knowledge of other developers' experience acquired via a network of informal industry contacts; the property press and similar less formal published sources; and secondary data published by commercial or government organizations (Henneberry and Rowley, 2002, p.101)”.

Lack of accurate information in the right timeframe is often the main weakness of development appraisals. This has made it hard (a) to predict costs and returns from development and (b) to decide on the sensitivity of the variables.

Formal econometric forecasts are often based on past trends but there are breaks in the study patterns rendering forecasts inaccurate. To make their reports appear rational, credible and in line with the general expectation of the market and the forecasts of others, they may massage the figures. Professionals or decision makers make judgments and their forecasts are affected by the social, political, cultural and institutional domains they are working in (Gallimore (2004)).

Gallimore et al (1999)'s research on thirteen small property companies interviewed persons responsible for making property decisions at a high level. Though their research related more to investors in property companies, the results revealed actions that might be

applicable to developers. The investment strategies of the companies interviewed “displayed a degree of flexibility in strategy ... perhaps to cater for the heterogeneous nature of the property market”.

They found out that ‘market timing’ and ‘adding value’ were important. The decision makers would attach a lot of significance to the state of the market at the time of making the decisions. Some of them even made decisions counter to the cycles to add values. They would also ‘exploit an opportunity’ of a development considered undervalued, such as when the market is at a low level, before others in the market spotted the opportunity or acquired land and property from bankrupt companies. To seize such opportunities, the developer had to be mindful of information provided and react with ‘swift decision making’. Larger companies with ‘a more international scope’ would focus on ‘macro-economic issues’ but ‘smaller size national companies’ would be concerned with ‘local economic conditions’.

Adams et al ((1999), p. 13) also talked about similar issues and identified “windows of local development opportunity” which appear when the national property market booms. They appear even in fragile locations but “national development interests were reluctant to exploit” such opportunities in both fragile and even strong provincial locations.

In Gallimore record, private information dominated the decision making in the thirteen companies, rather than using thorough information as a basis as suggested by normative models. Gallimore et al (1999, p. 606-610) described their decisions as “satisficing”. The companies decision makers cited most frequently the “Estates Gazette” and “newspapers” as their source of information and 62% cited personal contacts including agents, valuers, directors of firms, etc. Gallimore et al commented that property companies may be the last remaining “coffee house” businesses in the UK. The smaller firms may not even employ valuers to give professional advice. Most firms focus on interpreting the data and information obtained and search for information until they find something that justifies their thinking or “initial criteria for investment”.

In their research, property companies ‘initial screening of investment opportunities’ was investigated. Most hesitated and did not give an answer. Several claimed to be ‘intuitive’ and based their decisions on ‘initial feel’ for the property, asking qualitative questions, apart from quantitative data on return or yield. These qualitative questions centred around:

- prior knowledge of the area and/or experience with the specific property type;
- opportunity to add value or acquire the property at a discount; and
- portfolio considerations.

Some others, in their initial screening, said it depended on availability of financing including the availability of bank capital if they did not have a strong capital support, and market conditions.

Such sub-optimal behaviour in making decisions is not just confined to small developers with limited resources. Gallimore et al ((1999) p. 603) commented that :

“corporate decision making, however, may also exhibit heuristics and biases that are analogous to those displayed by individuals.”

Tversky and Kahneman (1979) discovered that people's sub-optimal behaviour exhibited representativeness, availability and anchoring heuristics²³ in their reasoning. Forecasters are human and prone to such behaviour leading to overconfidence or herding in forecasting.

Diaz (1997) found no evidence of anchoring in valuers' behaviour but concluded that valuers may be influenced by anonymous expert opinions if they conduct valuation for geographically unfamiliar areas.

Gallimore (1994), nonetheless, discovered evidence of anchoring amongst valuers and that they put more weight on more recent information.

Gallimore et al (1999) summarised behavioural findings on the investment decision process that could also be applied to property developers which included :

²³ 'Representativeness' is a tendency to judge the likelihood of events by reference to their resemblance to other events or processes rather than by taking account of the true probabilities. 'Availability' refers to a tendency to be unduly influenced, in judgments of the relative true likelihood of events, by ease-of-recall of similar past events. 'Anchoring' operates when, in the process of making judgments, people fix on what they first mentally encounter (e.g. if the judgment involves numbers, the first rough guess or impression) and then, as they review new information, under-adjust from the anchor. In addition to proposing these 'heuristics', Kahneman and Tversky also developed the idea that, with choices involving risk, people may be more influenced by loss-aversion than by risk-aversion (Tversky and Kahneman (1979)).

- (a) decisions “embodying unrealistic objectives” that are focused on short-term gains rather than long run investment prospects and strategy;
- (b) developers might “overreact to current information, act with too much confidence and display excessive optimism”. Instead of engaging in thorough reading and market research, developers might rely on and be affected by current information in their records and those from personal contacts that would likely be more memorable than market information and therefore exert excessive significance in the decision making process. At the back of their minds, the story depicted in these figures and information is pronounced, sometimes “giving an erroneous interpretation of the market”, misleading developers into decisions that deviate from the correct path;
- (c) ‘subjective bias’ in forecasting. As will be mentioned later in this chapter, valuation professionals providing forecasts to developers are prone to mis-calculation due to subjective judgment on the figures to be input into the valuation tools, with little regard to the basic economic and property performance information. Developers themselves as the final forecasters of results might rely on ‘wishful thinking’, making decisions based on their desire for a certain outcome; and
- (d) ‘overconfidencein personal intuitionandcoupled with retrospective overconfidence’ as well as ‘oversimplify(*ing*) complex information’. Indeed, simple and straightforward information or comments would be preferred to complex quantitative data and information that is difficult to understand.

Gallimore and Mcallister (2004) further examined the judgement made in forecasts, with specific reference to commercial property markets. They conducted semi-structured interviews with nineteen interviewees who worked in property consultancies and agencies, a publicly listed property company, a fund management section of an organization and banks. They concluded that the findings of the forecasts are affected by the judgment of the professional making the forecasts, users’ acceptance of the forecast result, smoothing²⁴ of

²⁴ Diaz described ‘appraisal smoothing’ as the ‘label ... applied to the observation that appraisal based return indexes exhibit significantly smaller variability than transaction based indexes. Appraisal-based return series are generally constructed using reappraisals. (Diaz (1999), p. 330)’.

the figures after in-house consultation and advice from agents on the ground. Geltner et al (2003) commented that :

“transaction prices are a noisy signal and it is the appraiser’s role to extract the signal from the noise in an efficient manner. This tends to lead to a process known as appraisal smoothing ... or appraisal lag”.

This is particularly true when “extreme forecasts are generated by a model”, then forecasters often engage in “self-censorship” or “are “censored” following in-house consultation” (Gallimore (2004), p. 337).

For the information provided by people on the ground, besides factual data such as sales data that may be known; to these agents, there was a “more qualitative kind of feedback, typically represented by market sentiment, or knowledge of the current preferences of market participants that have yet to manifest in data or statistics.” Forecasters, upon receipt of this information, may record them as a commentary alongside the original numbers. However, there may be pressure to change the figures to maintain a good relationship with the agents (Gallimore (2004)).

Gallimore and McAllister’s (Gallimore (2004)) study also found out that users may also intervene and add pressure for forecasters to change the figures. Nonetheless, sometimes forecasters would adjust the figures themselves in anticipation of negative responses from users. Forecast figures would also be “contested and mediated within organizations” through consultation with other in-house colleagues. This is particularly true if extreme results are generated from the models. This can be explained by the “anchoring” heuristics suggested by Kahneman and Tversky mentioned above.

Kinnard et al (1997) discovered evidence that US appraisers may consider changing the valuation conclusions in the face of client pressure. The comments collected in their research concluded that there is little compelling evidence of herd behaviour. However, forecasters would consult fellow professionals doing similar forecasts and their perception of the market performance may be affected by others’ forecasts – to avoid being too different from the general market forecast. This kind of “self-censorship” does exist.

It is worth noting that forecasters' adjustments are more likely in less mature or smaller markets where data availability and quality less satisfactory.

Appraisal smoothing, as mentioned above, may arise. Diaz and Wolverton (1997) described how valuers anchor to their previous value judgment and update in a limited manner their previous valuations based on available market evidence.

4.7 How firms and organizations make choices

After discussing how the behavioural context affects the pricing of developments and their risks, it is worth examining how firms / organizations and governments make decisions and choices, again in a more realistic behavioural context rather than the normative neo-classical model depicted in Chapter 3.

Review of decision-making theories and consumer behaviour

Baxter (1993) and Sheth (2008) discussed and analysed the behaviour of consumers when making decisions individually and on behalf of firms. Sheth (2008) went on to discuss the criteria for the decisions of consumers.

Individuals and firms/governments comprising individuals are similarly driven by various reasons for making purchases, the main reason being to achieve their goals. Individuals' goals arise from their needs and wants. As for firms/governments comprising individuals, each individual has different goals. It is pertinent to resolve conflicts between individuals to decide which goal to achieve. Decisions of individuals and firms/governments are complex and there is always a deficiency of information for making such decisions. They all, therefore, face great many uncertainties. Baxter (1993) and Sheth (2008) conclude that for complex decisions including those made for the first time, decision-makers resort to simplifying rules and resulting in decisions that are sub-optimal. Attention will now focus on the decisions of firms and that of Government by discussing the goals of firms, resolution of conflict and the criteria for making decisions.

Firms are formally organized and licensed entities with structures comprising major interest groups, such as shareholders, managers and employees, engaged in making, buying and selling products and services for certain monetary or non-monetary objectives. Development companies identified in this research refer to firms engaged in planning, constructing, and disposing/marketing of real estate properties for the purpose of maximizing profits.

There is very little literature pinpointing the decisions of developers. The most notable are Millington (2000) and Byrne (1996). Most real estate books and articles focus on the real estate market and sub-markets, the financing of real estate, investment in real estate, real estate law, the valuation of properties, real estate management, urban planning and real estate development (Havard (2008), McMahan (2007), Miles (2000), Ratcliffe et al (2009), Wilkinson (2008)). Understanding the purchasing decisions of firms in general will shed light on the purchasing decisions of developers.

There are several reasons for understanding the purchasing decisions of developers. Developers decide on which location(s) to choose for their land bank, development or redevelopment. They choose amongst plots of land in each location based on their budget, business aims and objectives. In deciding which plots to buy for redevelopment now or to keep in the land bank, they are essentially making purchasing decisions as corporate being consumers. All land in Hong Kong is owned by the Government but leased to individual companies or strata-title owners. Developers may buy the development right from lease holders for future redevelopment but need to pay a premium to the Government to lease the land. The Government's decisions on the supply of land, and on redevelopment legislation and rules will therefore affect developers' decisions. Understanding behaviour for firms as consumers and behaviour of Governments are therefore important to learning about developers' decisions in redevelopment.

The organizational goals of a firm are related to the goals of interest groups in the firm. Developers in Hong Kong are diverse in scale and composition. They range from small firms in which decisions are made by single entrepreneur to listed companies with formal organizational structures, rules and regulations for making decisions on individual redevelopment projects. Even for these listed companies, some may vest the decision-making role in the single most important person in the company.

Regardless of the scale and composition, the overriding goal of a profit-seeking firm (and development firms are within this category) is to maximize profits. Firms are obliged to maximize returns taking into account the level of risk.

There are other subservient goals of the firms; shareholders may prefer the firm to operate within equitable and sustainable principles on cultural, social and economic grounds. Take for instance, Islamic Funds' refusal to invest in interest-generating stocks (Mufti Taqi Usmani (2010)). Some environmentally-concerned individuals will only invest in firms that do not bring about environmental degradation.

Other interest groups in firms, i.e. the management and the employees have secondary goals too. They will be bargaining for pay, hours of employment, labour force size, working conditions, a certain stability of employment and a demand for equity of treatment within the firm. Personal motives such as the need for self-actualisation, a sense of security or belonging in a group, devotion to the betterment of the society, the acquisition of power and status, as well as the chance to express their creativity are also present. Marris (in Baxter (1993), p. 161) cited three main approaches to motivation in a firm : psychological, sociological and economic. Baxter (1993, 161) pointed out that managers may consider the prosperity and success of the firm important. When the unemployment rate is low, there is an excess demand for certain skilled personnel, or when the labour unions are exerting strong influence, employees' requirements will become a major consideration.

Buying centres are important in firms. These are groups of individuals in a firm having different skills sets and expertise who will come together to make decisions or recommendations on purchases. Sheth (2008) identified six roles for the buying centre : user, buyer, analyzer, influencer, gatekeepers (who decides on the flow of information to members of the buying centre) and decider.

Personnel from different departments may play one or several roles. Since they come from different departments in a firm and are brought up in different environments and have different background, their goals, expectations and criteria for purchasing decisions will be very different. The composition and importance of each part of the buying centre will evolve over time as buying is a process. At different stages, different departments will assume more responsibility. For instance, in the early stage, the identification of needs will enable the user to be of major importance. Further along in the process, the payer and

buyer will become more and more important as it comes to financing and the action to undertake the actual purchase.

Cyert and March (in Baxter (1993), p. 163) listed five subsidiary goals of a firm, including production, inventories, sales, market share and profits. They reiterated that the overriding goal is to maximize returns and explored how different personnel in the buying centre will consult and collaborate with each other before making the decisions. However, the five subsidiary goals may conflict with each other. A firm needs to produce continuously and make sure inventories are at satisfactory levels to maintain income and sustain the workforce. However, the need to maximize profits may bring them to conclude that inventories and production should be kept to a minimum when the market is at its lowest point. In that case, sales and marketing will suffer due to lack of opportunities for disposal of services or products. As such, there are conflicting goals amongst these individuals working in different departments and a way to resolve these conflicts is needed.

It is necessary to distinguish between straightforward habitual decisions, limited decisions for re-buys and extended decisions for new buys. For the straightforward habitual purchase, the buyer can simply take note of past experiences and repeat the decisions with slight amendments. For limited decisions on rebuys, the buyer is faced with a product for which the design or performance specification differs from the usual purchase. For complex new buys, the purchase is new to the firm. For a real estate development firm, all decisions related to land redevelopment will be complex new buys or at least modified rebuys that involve careful deliberation. The major reason is that each plot of land is unique and the large amount of money involved in the redevelopment project means that the risk of failing in a project is huge. Developers will undertake more comprehensive considerations, coupled with certain criteria set out by the firms in both limited and extended decisions. Some generic decision-making criteria and considerations will now be summarized.

Sheth (2008) listed the major factors affecting purchase decisions in limited and extended decisions : the perceived risks, importance, complexity and time pressure. The importance of the purchase refers to its role in the organization. For instance, the more costly the purchase, the larger the amount at stake and thus the more important it is to the well-being of the firm. Complexity means how easy it is to understand and manage the purchased

product or services. Time pressure means how necessary it is to make the purchase now. If it is needed urgently, the purchaser will act differently.

For perceived risks, there are two components. The first is the degree of familiarity/uncertainty i.e. the presence and similarity of past experiences. The second is the amount at stake i.e. the adverse impact on financial and performance aspects due to a sub-optimal decision. Five types of risks have been identified by Sheth ((2008), p. 287), namely financial risks, performance risks, social risks, psychological risks and obsolescence risks. Financial risks are of concern to the payer but other risks affect the user. It is worth noting that customers with prior knowledge or expertise will be likely to seek more information on the purchase than those with limited knowledge.

It may be worth pinpointing the role of perceived risks on a firm's buying behaviour. When perceived risk is high, firms adjust the buying behaviour to protect themselves and the firm as a whole. The buying centre will become more complex involving more members from a wider variety of departments and individuals with more education, expertise and experience. Decisions on from whom and where to buy will skew towards those with a proven track record. The information search will be more comprehensive with fact or commentary sourced from publications during the early stages and then more personal sources such as consultants, firms and counterparts in the industry with similar experiences. Conflicts amongst members of the buying centre increases as more members are involved. Where the risk of failure is higher, stress on the members will be intensified. Due to the huge risks involved in making purchase decisions, especially for extended decisions on new buys, it is worth understanding how purchasers make decisions. This will shed light on real estate developers' behaviour when undertaking redevelopment schemes.

Apart from these major criteria, Sheth (2008) also cited differences in organizational characteristics as factors affecting purchase decisions. These include the size of the firm, its structure such as the number of departments and the degree of centralization, and the purchasing resources including the needed personnel and finances.

Hill and Hillier (1977) in Baxter (1993, p. 167) suggested four major stages of purchase – the precipitation stage, the product-specification stage, the supplier-selection stage and the commitment stage. Decisions are made at each stage. Sheth ((2008), p. 339) listed six

stages: need assessment, choice criteria, request for proposals from suppliers, supplier evaluation, supplier selection and fulfillment and monitoring.

These steps are similar for the decision making of an individual or a firm. It is worth noting how different are the decisions of firms from those of individuals or households. The buying behaviour of firms is more formalized with written policies and rules. Those in charge of purchasing are accountable for their decisions and formal evaluation of and feedback on decisions are necessary. The firm may be capable of in-house production of the product or services. For example, when there is a land bank in the development company, they can undertake construction without resort to market purchase. Purchase is complex both operationally, as usually many personnel are involved - at least in the information collection stage and strategically as the risk of failure is high.

Need recognition results from both internal and external stimuli. The former means a depletion that arouses the sense of need. The latter refers to the information in the marketplace that leads the purchaser to feel in need. An information search is divided into the information they are already aware of, that they remember, and that which they decide to consider, i.e. awareness, evoked and consideration sets. The purchaser's search strategy, taking into account the time and costs involved, will limit his information source and the amount. For routine purchases, purchasers will simply repeat the past choice without resort to additional information. For extended new buys, they will undertake extensive search and careful deliberation as there is a high risk of making the wrong choice. Limited rebuys may induce the purchaser to search within limits for information pertaining to the product/services to be bought.

Hill and Hillier (1977) in Baxter (1993, p. 167) went on to identify the lateral loci where the functional areas are, mostly in lower and middle management; and the vertical loci where the managerial hierarchy is, mostly in the top management. Other literature pointed out that the decisions on what to buy, from whom, where to buy and which model rests on the lateral foci whilst the decision of whether to buy or not rests with the vertical foci. The complexity of the lateral loci depends on the nature of the purchase and the decision-maker's familiarity with the purchase.

Inevitably, there will be conflicts, mostly continuing, between the functional area and the managerial hierarchy as a whole, between individuals within the functional area and the managerial hierarchy, as well as between organisations. There may be conflicts between the goals of a firm, the values attached to the organisation, and perceptions of the risks and profitability of each purchase decision. Individuals may also conflict between their roles.

Decision rules and regulations will be set according to the firm's mandate, values, and goals to avoid and resolve conflicts. Stoner and Wankel (Baxter (1993), p. 172) pointed out that conflict resolution mainly rests on dominance and suppression from certain groups or individuals. Sheth (2008) listed four different ways to resolve conflicts : problem solving, persuasion, bargaining and politicking.

Problem solving can be deployed as a rational approach to identify additional information that could solve the conflicts. Persuasion is another rational approach to be deployed when there is disagreement on the criteria of decision-making. For this, additional information will not help and persuasion by group members or an outside party may help to resolve the conflict. Bargaining as another rational approach comes in when the difference is in basic goals and objectives. Politicking, however, is a non-rational approach that involves backstabbing techniques between or from partisan coalitions who would control the decision behind the scenes (Sheth (2008), p. 342). The whole firm will inevitably suffer from this last approach. It is common for firms to draw up decision rules :

“Clear, agreed and widely accepted decision rules ... help tackle such problems as uncertainty and complexity, ... also help reduce conflict, thereby facilitating attainment of the overall organizational goal (Baxter (1993, p. 173))”.

The overriding goal of the firm is to earn adequate returns. Baxter advised that the total profits a firm ought to earn are calculated by multiplying the value of a firm's assets by the normal rate of return demanded (denoted by r_n). However, there are different views on the appropriate value of r_n . In the corporate finance literature, the Capital Asset Pricing Model and the Arbitrage Pricing Theory Model assume the projection of past and the present figures into the future. These may not yield an accurate figure in some cases, firms are “(full of) complexity, lack of full information and true uncertainty (Baxter, 1993, p. 174)”.

Indeed, decision-makers are provided with limited information whilst faced with a lot of uncertainty and risk. As Simon (1957) described decision-makers suffer from “bounded rationality” so that despite the enormous resources of staffing, information technology, engineering, and finance, given the time and costs constraints, they can only limit their choice and therefore cannot make full-knowledge rational decisions as suggested by neo-classical economic models (Baxter (1993), p.173).

Decisions of individuals and firms comprising individuals are also subject to psychological effects on these decision-makers, in particular on their “expectations” and “perceptual distortions” (Sheth (2008), p. 342). Individuals’ background, education, personality, past experiences of similar purchases including price and quality/performance all affect their expectations. There are also perceptual distortions in that individuals are selective in choosing and understanding information, sometimes in a biased fashion.

Due to the limited information available, the abounding uncertainty, the mounting risks involved in extended decision making and the effect of the psychology of the purchasers, the systematic search most people would expect from decision-makers may not happen.

“Systematic search consists of a comprehensive search and evaluation of alternatives ... search information extensively....consult with a variety of sources, take a long time and deliberate a lot (Sheth (2008), p. 286).

Nonetheless, more often than not, most decisions are made based on heuristics which are implemented based on broad inferences from partial information, past experiences, others judgments and renowned suppliers.

For broad inferences from partial information, an example would be that redevelopment areas are stigmatized for poor safety, low returns and high yields. However, some redevelopment areas do exhibit good returns and prospects for a reversal of the downward trend in the population (Adair (2005)). Developers’ perceptions of high risks and low returns for redevelopment areas are therefore broad inferences based on partial information.

Other judgments may include those from counterparts in the industry as discussed in a previous section of this chapter.

Different Pricing Strategy

After examining at the firm level, which forms a broad and aggregate picture of their decisions, it is worth understanding how and why some developers' risk pricing strategy will be different from each other. It will be important to examine the price attached by each developer to redevelopment schemes.

Some developers may, in their decision-making, determine that the risk is too high, i.e. the probability of achieving a target rate of return will not be realized and therefore discard the proposed scheme. According to Adair (2003), the principal elements of risks in redevelopment schemes in the opinion of investors comprises

“planning, yield and rent, development costs, contamination and stigma, project duration and finance, and volatility” (Adair (2003), p. 218).

In the pricing of risks, developers may, as commented by Morley in Guy and Henneberry (2002)

“[avoid it] by omission” or “inclusion of a contingency sum in the valuation and/or to a change in the minimum profit margin to reflect perceived risk ... (or) the sensitivity of development profitability to changes in expected values, however derived, would also be examined” (Morley in Guy and Henneberry (2002), p. 81).

The sum or allowance made by developers, also called the risk premium, is usually expressed as a percentage, or mark up, on total development costs (including land costs).

“A typical allowance for a speculative scheme without pre-lets, or similar arrangements would currently be 15-20% of total costs” (Morley, 2002, p. 78) or approximately 20% in Darlow (1987), p.99).

It is also interesting to find out that different developers have different opinions on the same development, depending on whether they are risk-averse or risk-loving. Development

appraisals conducted by developers are therefore subjective ; one developer's appraisal may be completely different from another.

The price attached to risk will depend on a number of factors such as

“the type of developer, the size of the scheme, the length of the development period, the degree of competition (and hence optimism of the future), whether costs (and rents) have been projected, whether the scheme is pre-let or forward sold/funded and whether there are costs controlled by a fixed price building contract” (Morley in Guy and Henneberry (2002), p. 78).

In general, the higher the perceived risk, the larger the allowance made.

The difference is mainly due to the input to the appraisal. A risk-averse developer will be more conservative about the risks involved, and so the estimated costs and returns components of the development will therefore be different from their counterpart's. Limited provision and differential access to property information may also result in different assessments of the same development by different developers.

Henneberry and Rowley (2002) pointed out “two crucial influences on developers' decisions to develop:

- (a) the character of the developers ... operational environment ... the property market ...; and
- (b) the way that developers perceive and respond to the opportunities and constraints presented by that environment.”

(Henneberry and Rowley, 2002, p.101)

Developers generally price the risk of a redevelopment scheme. The price attached to the risk depends on a number of factors such as :

“the type of developer, the size of the scheme, the length of the development period, the degree of competition (and hence optimism of the future), whether costs (and rents) have been projected, whether the scheme is pre-let or forward

sold/funded and whether there are costs controlled by a fixed price building contract” (Morley in Guy and Henneberry (2002), p. 78).

In general, the higher the risks perceived, the larger the allowance made. Some developers will proceed only within a narrow range of likely returns, whilst others may accept flatter, more risky schemes with some probability of higher profits.

As mentioned previously in Chapter 3, there is a typology of different developers each with different objectives. Even for developers who develop for profit, each may have a different pricing strategy. As Morley pointed out ;

“each type of developer has slightly different development objectives and, therefore, approaches development appraisal and the assessment of risk in a particular way” (Morley in Guy and Henneberry (2002), p. 73).

For instance, the developer-traders generally lack funds and expertise for large projects and will therefore engage in short-term projects, assembling sites and obtaining planning permission, then selling the project to developer-investors or institutional investors who are not directly involved in development. Sometimes, they do engage in the whole development process and own the development after completion. Due to a lack of funds, they need to borrow from banks and need to get cash in quickly to minimize interest payments. Their short-term business nature entails a higher risk exposure. At the same time, they may face smaller profit margins from competition from fellow developer-traders due to the relatively lower set-up costs, and thus need to compete for business. This might force them to take on more risky business.

The developer-investors may “exploit (redevelop, refurbish or actively manage) their existing portfolios which have been acquired or developed for many years” (Morley in Guy and Henneberry (2002), p.74) and may raise their finances from their shareholders and borrow a smaller proportion of funds from institutions. They are thus better positioned to take risks.

4.8 Conclusion

This research uses the model of the neo-classical market as an initial point of reference. It is a simplification of the land and property market which assumes no transaction costs and the market functions smoothly without friction. Considering the market as a linear and continuous process does help the research to focus on developers' behaviour and what are the main risks developers concerned most. As the main aim of the research is to find out the trade-offs of the developers of different development risks and management measures, a simplified model will help explain more direct concepts.

However, the next chapter will discuss briefly transaction costs or the institutional economics theory to facilitate the understanding of the effectiveness of the Urban Renewal Authority (URA), which was set up by the Government of Hong Kong as its agent at arm's length to be operated according to prudent commercial principles similar to other developers in the land development market, to reduce transaction costs as suggested in institutional economics and NIE.

Developers price development according to the profitability and the risks involved. They make their assessments of profitability by residual valuation and cash flow analysis. To calculate the accuracy of the valuation and the risks involved, many undertake sensitivity analysis, devise scenarios and conduct Monte Carlo simulation to check the probability of risks. However, the property market is imperfect with infrequent transactions. Assessments of schemes are difficult and often inaccurate. Risks of development and in particular redevelopment are therefore the major concern of the developers.

The normative approach to pricing of risk has, however, been under attack for being unable to explain fully the actions of developers. The behavioural approach is adopted in this research to understand developers' appraisal smoothing, judgement and usage of secondary or informal data and information. Both the individual and organisational levels of decision-making behaviour have been discussed. The behavioural approach helps explain the differences between the behaviour of risk-loving versus risk-averse developers.

Chapter 5: Management of Risk

5.1 Introduction

The previous chapter discussed the neo-classical approach to understanding developers' decision making in their choice of redevelopment projects. The constraints of this approach have been examined, in particular the lack of accurate data and information, the deficiency in calculating the sensitivity of data to be inputted, the behaviour of valuers and decision-makers in affecting the estimation and determination of costs and returns. Added to that is the less than perfectly efficient redevelopment market.

Before further discussion, it is worth recalling that, at the beginning of the previous chapter, the alternative approaches to understanding developers' decision-making have been briefly examined, in particular the institutional and the welfare approaches. This chapter will further discuss the relevance of these approaches to the research.

This research is based on the neo-classical model, which previous chapters have thoroughly discussed. This chapter will start with discussing the transaction costs theory and institutional economics. It will explain the deficiencies of the neo-classical theory in explaining completely the land development process. The section after that will discuss risk management measures of developers and the Government in a redevelopment context based on the institutional approach. This will then lead to the introduction of the Urban Renewal Authority (URA) in Hong Kong, which is an organisation set up at arm's length from the Government to deal with urban renewal in Hong Kong, with redevelopment as one of its four major roles. The strengths and weaknesses of the URA in undertaking redevelopment will be discussed.

The chapter will conclude by setting out the key research questions that come out of a neo-classical model and will introduce the research tool, conjoint analysis, which is a behavioural tool to understand developers' decision-making.

5.2 Transaction Costs Theory

The Neo-classical model assumes a perfect market and perfect information. It “presumes negotiation among agents as necessary but unproblematic” (Healey, 1990, p. 92). However, Cuff (1991, p.96) commented that “the object of negotiations, the building, is created within negotiations”. The fact of bounded rationality and information deficiency as well as opportunism requires the emergence of alternative theories. Two other types of approach have been identified in understanding the land development process: welfare economics and institutional economics. This chapter will focus discussion on institutional economics instead of welfare economics because the former is about process efficiency which is the aim of the research rather than the allocative efficiency which is the concern of the latter. Besides, the scope of welfare economics is rather narrow, focusing on merely allocative efficiency and is therefore deficient in explaining the other goals such as social stability or effectiveness, justice and legitimacy (Buitelaar, 2004). Pareto optimality referred to as an operational means of allocative efficiency is unattainable. In contrast, institutional economics focus on transaction costs and is “an overarching concept for judging different institutional arrangements” (Buitelaar (2004), p. 2543).

Ronald Coase first discussed institutional or transaction cost economics in 1937 in a paper that asked why and under what conditions should firms emerge. It was concluded that if the market were efficient, it should be cheaper to contract out than to hire. However, Coase found out that there were transaction costs to using the market such as search and information costs, bargaining costs, keeping trade secrets and policing and enforcement costs. There would be decreasing returns on the size of a firm and an optimal balance need to be arrived at. Other things being equal, firms tend to be larger the lower the costs of organising or less the mistakes entrepreneur make, and the slower the costs of organising or number of mistakes rise with increasing transactions number.

Ball (1998, p. 1515) commented that the debate on property research “can no longer be one about a theory missing out institutions”. He further suggested that “the received dichotomy between the economics of property markets and institutions is a false one... there is a continuum of issues rather than an opposition” (Ball (1998), p. 1502).

Healey put forth institutional views for researching property development “with a particular purpose in mind, that of research on the interrelation between urban regeneration policy and the development industry” (Healey (1991), p. 220). Due to the market failure in the urban regeneration sub-market, Healey argued that the market-based paradigm could not fully explain the situation. Guy and Henneberry (2000) refined this institutional approach explaining that property decisions were “economically and socially constructed” (Guy and Henneberry, 2000, p. 2407).

The development process and the planning process can be regarded as a production process and so treated from a transaction cost perspective. Transaction costs refer to all costs other than the costs of physical production (Lai (1996) p.84). It includes not just the costs of the transaction but if transaction process is eliminated by in-house production, also coordination costs as well as the information costs of acquiring it. They are “deadweight losses that have to be minimised... from a perspective of cost efficiency” because they “do not contribute directly to the output of a development process”, as in construction.

Instead, the intention is to make the development process smoother and more efficient. A classic example is the build up of property rights which will allow the flow of land and services between, say, landowners and developers with certainty and clarity and therefore more smoothly and efficiently.

Institutions are therefore set up to reduce uncertainties and risks. North (1990, p.3) referred to an institution as “the rules of the game in a society or, more formally, ... the humanly devised constraints that shape human interaction”.

In the development process, there are different forms of transaction costs and they come about in many stages of the process. Take land acquisition as an example. The neo-classical model assumes there are no transaction costs. However, in land development, costs such as in the negotiation of the contract terms and compliance with its terms are transaction costs. In the planning stage, the time required in applying and negotiating for planning applications can give rise to significant transaction costs. The design of the building entails consultancy fees, which are production costs. The project architect will obtain approval from the Government and reach an agreement with the developer on the preliminary and detailed design, which are classified transaction costs.

Buitelaar (2004) showed the respective production and transaction costs in the design stage of the development process. He compared the planning systems of El Paso County in Texas, USA, that borders Mexico, the Lange-Veerstraat in Holland and the English systems. He concluded that in a relaxed or non-existent planning regime as in El Paso, transaction costs will be added to the development process. Developers and landowners have to figure out what the adjoining land uses and the impact on their plot of land. They then negotiate and deliberate with each other to reduce uncertainty.

In the UK, the content of a planning permission may be negotiated. The developer may offer a planning agreement to the Council. Such negotiations will add to transaction costs at a later development control stage but lower costs at the plan-making stage (Buitelaar (2004)).

Price is taken as the coordinating mechanism in the exchange of land and properties in the neo-classical model. The market mechanism assumes actors interact in a non-emotional, anonymous manner so that supply and demand will eventually reach the equilibrium point to clinch the transaction. However, the assumptions of the neo-classical model may not be fully applicable to the land and property development process.

As Evans ((1983), p.133) pointed out “although, in general, land may safely be assumed to be used by the highest possible bidder, there are many reasons why this may not be true in particular cases”. Adair et al (1995) also remarked that the market does not work in inner-city developments. Land is fixed in location and therefore the location restricts the amount of land supplied. The demand for land is affected by the characteristics of the adjoining land such as proximity to transport nodes. Landowners may not respond to price changes speedily as assumed in the model. They may also hold onto their land for speculation purposes. Some people may attach emotional value to a particular piece of land or premises.

Institutional economics focus on the role of transaction costs as explained above. Transaction cost economics assumes that actors can choose the way transactions are made, which is both a contractual relationship and a form of governance. Institutions are set up to minimise transaction costs and complete the exchanges. Formal and informal rules and regulations are set up to foster cooperation and trust between actors and so facilitate the transaction. A classic example of formal rules is compulsory purchase of land and

properties that do not involve the market supply and demand mechanism. Some parties “negotiate on the basis of mutual trust” (Needham (2004), p. 2063). Examples put forth in Needham and de Kam’s research (Needham (2004), p. 2063) include the agreement on the price to be paid between a housing association and the Government or the developer and “land deals through the old boy network” (p. 2064).

5.3 Risk Management and Institutional Economics

As explained in Chapter 4, land and property markets, especially the redevelopment sub-market, are less than perfect and riddled with externalities. How then can they be improved? Institutional economics focus on the need for setting up institutions to reduce transaction costs, which is a form of governance as explained in the last section. The following paragraphs will first elaborate the institutional approach for proposals on governance. Then, the risk management measures of Government and developers will be discussed. The last section will supplement an analysis on the work of the URA set up by the Government of Hong Kong to oversee redevelopment in urban areas in Hong Kong.

Political Economy of Institutionalism

Political Economy of Institutionalism conceived “the land and property markets as networks of rules, conventions and relationships (Keogh & D’Arch, 1999). As suggested by Jepperson (1991) and quoted in Adams et al (2005), the land and property markets also operate within :

- (a) “regimes” – which “refers to explicitly codified rules and sanctions that are monitored by a central authority” such as the “planning system”;
- (b) “cultures” – which “are customary or conventional in character and are not monitored” by a central authority; and
- (c) “formal organizations” – which refer to “the way in which organizations operate and relate to each other, accepting and reinforcing or challenging and transforming prevalent regimes and cultures” (Adams et al, 2005, Ch. 3).

As mentioned, redevelopment schemes are inherently risky and uncertain. Public policy should aim to enable development of effective institutions in the market to “reduce or

contain risk and uncertainty in order to enhance user, developer and investor confidence in new forms of development” (Adams et al, 2005, p. 38). Various methods have been put forth, including through the interplay of a network of actors (developers, agents, operators, owners, etc.) which are collectively referred to as “actor-network relationships”. Besides, it may be through “formal rules and regulations” determined by the governing party or “informal customs and conventions” public policy may improve the operation of the land and property markets (Adams et al, 2005, Ch. 3).

As Adair et al (1998, p.16) pointed out,

“reduction of risk is a key issue with the result that private sector investment depends on the facilitating role of the public sector”. They call for the public sector to take a lead in confidence building measures, including a guaranteed minimum standard of infrastructure, clarity in public policy and processes, targeting of initiatives, simplified planning processes and land assembly.”

Actor-network relationships

It is widely believed that building up the local capacity of institutions and fostering richness in market networks are essential. Building up strong institutional and market networks in urban regeneration areas can provide investors and developers with the confidence to take a long term view of their projects, apply lower property yields and thereby make the projects more viable (Adams et al, 2005). These include better communication, support systems amongst developers and inter-linkages amongst the actors in the property market to remove blockages and bring about an improvement in the functioning of the market.

Developers’ relationship with investors has been well known to affecting their actions through the increase or reduction of yields. Investors engage and thus compete for regeneration schemes which show signs of rental growth. Such competition reduces property yields. In fact, Adair et al (1999) showed that regeneration property yields had decreased over the period involved in their study, which indicated that investors were more aware of and felt secure about investing in regeneration areas.

The partnership with the community may be less seriously taken. Adair et al (1999) conducted a survey on evaluating investors' behaviour in urban regeneration. They examined past initiatives in attracting private investment in urban regeneration areas in the UK such as the establishment of Urban Development Corporations (UDCs), Enterprise Zones (EZs) and English Partnerships (EPs), and the more recent use of City Challenge (CC) and Single Regeneration Budget (SRB) funds. Their findings shed some light on Government initiatives that could prove effective. They found out that the bid for funding in CC and SRB funds emphasising partnership with the community attracted much private investment in regeneration areas. Government grants and support as in UDCs and EPs thus provided a "cushioning effect". In contrast, fiscal measures as in the EZs proved to be less than effective.

Research has indicated that Government may also invest in infrastructure to increase the attractiveness of redevelopment areas, undertake prior land assembly and incentives such as financial support for occupiers to reduce risks for developers. Clearer Government policy and procedures in implementing such schemes would also help.

There is also a need to build up social capital and communication between the public and private sectors. Devolution of powers may facilitate private investment, increase transparency and increase efficiency. Public-private partnerships which entail private finance and expertise, as well as public support through top-up grants, tax relief and provision of infrastructure and/or cheap land all increase the prospects for rental growth and reduces some of the risks attached to redevelopment areas. Birmingham City Council has transformed the city centre from one stigmatised with inner city problems due to segregation of communities by unsafe pedestrian networks below the densely intertwined highways through a public-private partnership, working with both developers and designers to develop and promote a design vision for the city. The planning authority assumed the role of enabler and not merely (as traditionally envisioned) provider and controller.

Formal Rules and Regulations

The 'legal framework for property market operations' will set the extent to which risk, liquidity and viability of the investments will be considered acceptable. As in other kinds of law, land and property law is shaped by the ideologies, cultures and practices of a particular community, including that of the property professions, the developers, investors, users and the Government engaged in it.

Governments may strengthen private property rights to reduce transaction costs by "minimizing negative institutional interruptions to the expected future flow of returns from investment" (Adams et al, 2005, p.50) and thus enable externalities/social costs to be taken into account by the system.

Other laws, rules and regulations set by Government related to land and property development may include those related to planning, environmental protection, land assembly, construction, etc..

Development plans are drawn up to communicate the Government's land use proposals for an area thereby creating certainty and stability in the market. However, plans may be outdated and thus not able to transmit the needed information. Alternatively, they might be revised regularly to keep up with the current conditions of the site and the surrounding area, but such frequent reviews, though flexible, will create uncertainty in appraising investments and making investment decisions.

The recent emphasis in England has been on brownfield redevelopment and has set a target for the proportion of new housing development that should be provided through redevelopment rather than on greenfield land previously not used for development. Such a target has constrained the supply of land for development according to the building industries. Developers call for relaxation of development control. Cheshire (2005) in examining the risk of regulatory reform in the land use planning system in the UK, contended that

"given the weight of the evidence that real estate prices are substantially increased by regulation, it is critical from an investor's perspective to

assess the risk that the regulatory constraints will be relaxed in the future” (p. 239).

This is not just confined to house prices, since the policy on containment is also “applied to individual land use classes ...(and) ... increase the occupation costs (and the prices of land) for all categories of real estate”.

Informal Customs and Conventions

Informal customs and conventions may be developed to enable smoother functioning of the development market. Hodgson (1998) as quoted in Adams et al, (2005, p.50) argues that “rules, norms and conventions can play an equally important role in making the world more certain”.

Cheshire (2005) commented that homeowners are keen to defend their interests. As homeowners are also voters, they tend to oppose the development of houses and usually commercial property because such developments increase supply and reduces amenity values and hence house prices. The established behaviour of buyers to prefer housing areas with good schools is also affecting the risk of development in old run-down redevelopment areas, which often lack good schools, and other needed social and supporting services.

Research conducted by Adair et al (1999) also identified other factors that are “perceived (as) necessary to improve the flow of private sector finance”. These include :

“simplified administration of funding, clarity in public policy and processes, increased accountability of ad hoc agencies, a guaranteed minimum standard of infrastructure, targeting of initiatives according to the private sector’s priorities and commercial requirements, land contamination remediation, improved provision of information on sources of finance, long-term tax-breaks, central government as more effective enabler, simplified planning procedures, commercially based marketing strategies for urban regeneration strategies, environmental enhancement initiatives and help in land assembly” (p.2043 – Table 7).

5.4 Risk Management Measures undertaken by developers

The following will discuss the other risk management measures which are undertaken by developers.

Risks cannot be avoided but can be reduced or managed by

- (a) diversification;
- (b) purchasing insurance; and
- (c) obtaining additional information (Pindyck, 1998).

Obtaining additional information may reduce risk because it saves developers making decisions based on limited information. With market research and better information on the market conditions, a better understanding of market trends in the demand and supply of any development type will be enabled and help achieve expected returns.

Risk can also be transferred by taking out insurance, contracting-out construction or other processes, or hedging²⁵ (Fisher 2005). For instance, arrangements can be made to fund the project by institutions or prospective users coming into joint venture with other more experienced companies, or raising funds through ordinary shares thereby sharing the risk with other shareholders. A risk premium would be attached to the project when transferring the risk.

There are many risk management methods for developers. A checklist of the risk management methods in different stages of the development process are listed below (based on Millington 2000). However, all these are at the cost of lower returns and profits.

Land Assembly

Developers may secure options to purchase the site or enter into conditional contracts for site purchase before obtaining Government approvals. If planning approvals, lease modification or land exchanges, and other assessments are secured or confirm no major

²⁵ **Hedge** is a position established in one market in an attempt to offset exposure to price fluctuations in some opposite position in another market with the goal of minimizing one's exposure to unwanted risk (Wikipedia - Hedging).

negative impact, the developers will buy the rest of the development. Otherwise, the developer will forfeit the down payment.

Many developers prefer using third parties for acquisition of properties gradually so that the costs will not be escalated for the last cohort of properties to be acquired. If property owners know that developers are assembling their properties, they may also raise their price than when they sell it on the market. Using third parties and subsidiary companies to acquire sites will minimise such risks.

It is also common for developers to create and own a land bank and to release land ripe for development or redevelopment at the developers' own pace. Such practice is very common in house building. This land bank can also secure the developers a shield against high land costs since developers can buy when the market price is low and avoid gathering properties when the market price is high.

Feasibility Study

Developers make decisions based on the limited information available. Given detailed research on market conditions, whether there is oversupply or a lack of demand, they can time their disposal of development and respond to different market cycles with the right strategy and so maximise their returns. Regular market research also allows them to build up a system to allow early detection of changes in market conditions thereby making the most of the ups and downs in the cycles. For larger developments, developers will divide the construction and delivery into stages to optimise the use of resources, reduce the risks involved and maximise the returns that can be obtained. This is particularly true when the market is volatile and inflation is high.

Developers will also choose the type of development, locations and sites to invest in with which they are familiar, with fewer problems or which will yield a good return. They will try to keep a good relationship with the planning authority and Government land agent to ensure that they can negotiate for better terms in the development plans, planning permissions and the leases.

Financing

In the appraisal of a redevelopment, developers will set a risk premium according to experience and judgement and on a case by case basis. To cushion themselves against risk, they assess the portfolio of schemes in their basket and take into account the risk position of the company before making decisions. For each project and for the whole portfolio, they plan their financial gearing so that if problems are encountered, financial viability is not destroyed.

Construction

Developers may enter into fixed-rate building contracts to cap the building costs and to contract out construction work to reduce the risk and to lower the costs through competitive bidding. A competent and reliable builder will minimise the risk of construction. Developers will allow contingency sums or take out insurance to guard against cost and time over-runs.

Marketing

In the delivery of the development, developers may undertake pre-lets and pre-sales to ensure returns. The fluctuation in yields may be mitigated by forward funding a development (to acquire the site before construction commences and provide the developer with short-term finance at a preferential rate of interest).

Previous Research

A previous study by Fisher and Robson (2005) partially substantiated the academic literature discussed. However, the survey only discussed the costs, construction and disposal of development aspects. It did not touch on the feasibility, i.e. the planning and design stages. This research will focus on the planning and design stages and the context of Hong Kong will be examined in later sections.

Fisher and Robson (2006)'s survey of developers' perception of major risks in UK office property development (Fisher, 2005), was followed up by interviews with nine managers and directors in property development firms who had responded to their questionnaires on their perception and management of the risk related to office property development. The

following eight methods were considered by developers (ordered in the list according to the importance), who had to rate them ‘crucial’, ‘important’, ‘not used’ and ‘don’t know’.

- (a) Fixed price contract
- (b) Pre-letting
- (c) Advance purchase
- (d) Option to purchase
- (e) Joint Venture
- (f) Phasing
- (g) Mixed or flexible use
- (h) Finance cap

Fixed price contract

A fixed price contract was the most popular with 78% of the respondents to Fishers and Robson’s survey, rating it as either ‘crucial’ or ‘important’. Most developers favour fixing construction prices but this method has a cost premium attached. The fixed price contract, according to Fisher and Robson, may be attributable to mistrust between developers and contractors. A full fixed price contract may decrease the contractor’s incentives to improve and focus his attention on making claims. Some developers nowadays prefer a long-term partnering approach and go into joint ventures with contractors.

Pre-letting

Pre-letting is mostly undertaken before building starts and will trigger a construction contract. 48% of the respondents in the survey rated pre-letting as either ‘crucial’ or ‘important’. However, developers cannot control the availability of pre-letting and therefore the importance of this measure is relatively lower than expected. Pre-letting is usually associated with large companies seeking expansion space in times of economic boom. Bespoke space that fits the operational needs of the company is usually preferred to those already provided on the market. It is usually at the early stage of the development cycle that pre-letting will be most common. In contrast, developers are keen to seek pre-letting in a weak market which transfers risks whilst having the option to sell the whole development together with the lease. It also offers flexibility over finance. When in a rapid rental growth period, some developers may reject a pre-let and seek rental increases during

construction. A trader-developer may have to seek the views of the institutional investors whom they partner, whilst an investor-developer may have more power to manoeuvre either to take on the pre-let or to take on risk hoping to gain from rental growth.

Forward Sale

45% of respondents adopted this measure. Developers may go into joint ventures or limited partnerships with funds to enable such forward funding arrangements. Its merit is that it provides 'take out', or partial risk transfers and limits the developers' risks. The downside is the need to retain risk on construction and to report regularly to the fund. The fund may likely pre-let the development. For such forward sales, track record and reputation as well as personal contacts are vital. Trader-developers are more likely to adopt this measure to dispose of the assets without delay. Almost by definition, investor-developers are unlikely to enter into forward sales. They may prefer retaining the risk in a prudent manner.

Options to purchase the site

46% rated this as 'crucial' and 'important'. Options to purchase the site are mostly used when there is uncertainty relating to site assembly, site condition or planning permission. Most developers commented that landowners are nowadays well advised and accrue the land rent. Developers therefore have to pay the full market value for the land.

Joint Ventures

43% of respondents rated joint ventures as 'important' or 'crucial'. Joint ventures may be with property owners, banks, institutions, contractors or other developers. Financing issues and the need to cap the short-term interest rate will call for joint ventures as a risk response. Joint ventures partially transfer all risks, which is quite unlike all other methods. They do not reduce the probability of risk but do reduce the negative impact of risk on individual developers. It helps diversify risk in a developer's portfolio.

Phasing

40% rated this as important or above. Phasing is used to "match supply and demand, reduce risk and improve the developer's cash flow". It is less common in compact cities such as London where sites are small and demand and land prices are high.

Mixed Use

28% of respondents chose this. It can be a kind of risk avoidance. Noting that the survey was related to office development, mixed use was not common. The adoption of mixed use may be employed to reduce planning risks.

Finance cap

Only 25% of respondents rated this as important or above. It is related to joint ventures and is the least popular, probably because of the low interest rate environment during the time the survey was conducted.

*Appraisal smoothing*²⁶

A developer may also undertake better estimation to ensure their development appraisals are a more realistic reflection of the perceived levels of risk thereby helping them to identify and reduce risk. As mentioned, this includes reporting the appraisal results in a range rather than as a determined value. To deal with the problem of high sensitivity of variables, risk management measures such as sensitivity analysis, scenarios and Monte Carlo simulation may be undertaken to tell the developers the probability of a certain range of results occurring. However, these techniques are still underdeveloped and they are at best tools to help developers make decisions and will not make decisions for developers.

5.5 Risk management measures – Case Study of Hong Kong

This section will examine the relevance of the three methods put forth by institutional analysis to improve the redevelopment markets in the Hong Kong context with particular reference to the URA.

²⁶ Diaz described ‘appraisal smoothing’ as the ‘label ... applied to the observation that appraisal based return indexes exhibit significantly smaller variability than transaction based indexes. Appraisal based return series are generally constructed using reappraisals. (Diaz, 1999, p. 330)’.

(A) Hong Kong Government

The Hong Kong Government's recent review of the Urban Renewal Strategy (URS) seeking comments and involvement of different stakeholders is a move towards integrating and enhancing actor-network relations in undertaking urban renewal, including redevelopment.

As for rules and regulations, one example is the planning system, which is important in maintaining stability, transparency and accessibility for developers. In Hong Kong, the zoning system provides clarity on Government intentions for certain plots of land with a list of uses either always permitted or requiring planning permission. This provides certainty and allowance for much flexibility as well as conveying to potential developers what the neighbours will likely develop.

A recent amendment to the Town Planning Ordinance in Hong Kong increased public participation in the development control system. Planning applications will be published in the newspapers and details of the proposals released to the public for comments before consideration by the Town Planning Board (the Board), i.e. the body making decisions on planning applications in Hong Kong. This change in formal rules put up additional hurdles for developers whose schemes could be affected by public opinion. However, the increased openness and transparency of the planning application system irons out possible objections from the public at the later stages of the development. It can therefore be argued to improve the property development cycle and reduces the risk of development.

In Hong Kong, the recent land application scheme invited developers to apply for land to be put up for auction in lieu of the previous practice of a regular monthly land auction. The system requires interested developers to apply with a proposed price for a particular piece of land in the Government's land bank. If the asking price meets the Government's valuation for this piece of land, this piece of land will be put up for auction. The developer who applies for the piece of land pledges to buy the said land at the minimum price he asks for if nobody raises the price higher at the auction. This scheme allows a more stable provision of land to the market whilst taking into account the fluctuation of demand depending on the performance of the economy at the time. However, such an application system may also be manipulated by large developers in an oligopolistic property market as developers could stop applying for land to be auctioned so restricting the supply of

properties and driving up property prices. However, there has also been criticism that the Government's valuation of land is too aggressive, deterring developers from bidding.

(B) Developers

Informal Customs and Conventions

Developers know well how they can affect customers' preferences. The property industry is keen to produce and market new products and ideas. In Hong Kong, Times Square in Causeway Bay was redeveloped in the 1990s from an under-utilised tramway depot to a first of a kind multi-storey shopping centre in Hong Kong. It rode on the rising income levels of Hong Kong people and the demand of the general public for a high-class shopping and leisure centre. The Cyberport, also in Hong Kong, was built at the time as a cluster of ICT buildings when the market was at a low point in year 2000 and the Government was looking for ways to diversify the economy. They were both innovative ideas that can be treated as informal customs and conventions.

New initiatives put forth by the Hong Kong Government are often taken on board swiftly by developers, if they can benefit from them. The exemption of green building features from Gross Floor Area calculation²⁷ enticed developers to develop green buildings to improve environmental and sustainability standards.

(C) URA

Formal Rules and Regulations

At the strategic level – the URS was published in November 2001 and set out the policy guidance for the work of the URA. It sets out the following, inter alia:

- (a) the purpose of urban renewal is to “improve the quality of life of residents in the urban areas”. Urban renewal should be conducted with a “people-centred approach”;

²⁷ The exemption of green building features was through the issuance of Joint Practice Notes by the Planning, Building and Lands Department in Hong Kong since 1999**.

- (b) the role of the URA should embrace redevelopment, rehabilitation and heritage preservation;
- (c) land acquisition should be by agreement before applying to the Government for land resumption;
- (d) the processing of projects should include proper planning procedures, conducting freezing surveys, consulting district advisory committees with wide public consultation, setting up of social service teams to assist residents, and undertaking social impact assessment (SIA)²⁸; and
- (e) the financial arrangements for the nine target areas designated to facilitate better restructuring and re-planning, and the planning parameters for projects.

As stated in the above paragraph, the URS has stated the overarching aim of urban renewal as well as the role and ambit of the URA. It has outlined a people-centred approach for the operation of the URA. However, no detailed rules and guidelines were provided on how to achieve such aims.

The URS set out the nine target areas for renewal has not specifically indicated the role and weight given to redevelopment. Planning for the target areas does not aim directly at urban renewal and there is no redevelopment strategy for each area. This creates uncertainties and risk for landowners and developers. The Wanchai district comprises a large number of low-rise dilapidated buildings. The URA adopts a so-called “district-based approach” to revitalise the older parts of Wanchai. Consultation on the Wanchai Revitalisation Scheme with the Wanchai District Council only commenced in January 2008 though work was started in-house by its predecessor, the LDC. The major developer in the Wanchai district has also revealed its vision for the district. However, there has been a lack of a comprehensive strategy integrating the redevelopment/renewal strategy with overall planning for the district, which includes planning aspects such as the impact on traffic in the district, optimal development intensity, effective urban design and air ventilation and the respect for and preservation of local culture. Some even consider that the urban

²⁸ The URA must conduct a non-obtrusive SIA prior to publication of the proposed project. The content includes demographical characteristics, social and economic characteristics, community and welfare facilities, cultural and community characteristics of the district, etc., as well as an initial assessment of the potential social impact of the project and the mitigation measures required. The content also covers the needs of affected residents, particularly the elderly, disabled and single-parent families. After announcing the project in the Government gazette, a freezing survey will be conducted to gather the necessary data for the preparation of a detailed SIA.

redevelopment strategy should be a strategic and territory-wide plan to be included as part of long-term positioning and economic development apart from the town planning aspect of Hong Kong.

For projects in which a large developer or consortium of landowners and developers have accumulated most of the land in the project area (in some cases such as when the area has been included as one of the project or scheme of the URA), developers and owners are required to cooperate with URA. There are many statutory procedures under the Urban Renewal Authority Ordinance (URAO) to follow in URA projects. Nga Tsin Wai village was a classic case of ex-LDC/URA projects suffering from a prolonged process that added to the risks of redevelopment due to the lack of agreement between the developer and the URA/LDC.

A major developer in Hong Kong had bought a large proportion of the private property units in Nga Tsin Wai before the LDC (the URA's predecessor) announced the designation of the project in 1998. The developer sought the inclusion of a large amount of Government land to facilitate the redevelopment. The sizeable amount of Government land involved was not approved by the Government lands authority. However, LDC did not acquire the properties from villagers at that point due to the statutory and procedural constraints. The developer, therefore, acquired even more properties during that period.

The individual landowners suffered because of a long-delayed process before the successor of the LDC, i.e. the URA, seriously accelerated the pace of the project. This was not done until the remaining titles were acquired by the URA after the field visit by the Secretary of Development in July 2007. The former LDC and the URA proposed to preserve the village gatehouse and stone plaque, the temple and a number of village houses to form a themed conservation park. However, if institutional mechanisms had been in place so that landowners or a major developer could effectively redevelop or revitalise the area through obtaining relatively large amounts of Government land, it is doubtful if the URA would be the only intervention mechanism.

At the working level, the URA adopts a 4Rs strategy for urban renewal. This includes:

- (a) Redevelopment
- (b) Rehabilitation

- (c) Preservation
- (d) Revitalisation

For redevelopment, the priorities of the projects will be determined by the condition of the buildings, the living environment of the residents, the environment of the area and the utilisation of land, etc..

In the recent review of the URS, many professionals, community groups and the public considered it unsatisfactory that the URAO and URS focus primarily on redevelopment with less emphasis on the other 3Rs.

The URA has been required by the URS to adopt a financially prudent approach to self-finance, to implement urban renewal programmes consisting of 200 new projects and to give priority to the 25 uncompleted projects of the former LDC in the next twenty years. From its establishment in 2001 to the end of March 2009, 45 redevelopment projects have been started and partly completed (including 25 projects of the former LDC), providing over 17,000 flats, almost 490,000m² of commercial space, almost 55,000m² of GIC facilities and almost 37,000m² of open space. **Appendix V** shows the details and current progress as at the end of March, 2009, for the URA projects.

Redevelopment is inevitable in most instances due to concerns about building safety. Owners and residents in these dilapidated buildings also prefer to improve their living conditions through buy-out by the Authority and to move to modern units. Nonetheless, redevelopment per se without consideration of the sustainability of the local businesses and the continuation of the character of the area will be detrimental to the effective renewal of the whole area and even undermine the attractiveness of Hong Kong overall. For instance, in Lee Tung Street in Wanchai, which is a concentration of wedding card shops, the operators wished to relocate together to another URA project area in Johnston Road and Ship Street, or to maintain their shops in the same place. This will help to avoid the loss of wedding card shop-street character and maintain the business. However, due to a lack of linkage between the projects, there was no provision for this. Redevelopment per se is not to be blamed for vandalising local character and sustainability, but poor redevelopment is. As such, it is pertinent to consider how to reduce the risks of redevelopment with the aim of facilitating the URA and future ‘developers’ (who could be the owner-occupiers themselves) to undertake better designed and thought out schemes.

According to the current URS, the URA needs to submit for the Financial Secretary's approval an annual business plan for the next financial year and a corporate plan for the next five years. The reason is the need for URA to be self-financing in the long run and operate according to prudent commercial principles. However, the business plan and the corporate plan of the URA are not known to the public to protect sensitive information and to avoid inviting land speculation. Without such information and a lack of overall territory and district-wide planning and redevelopment strategies respectively, the public, developers and landowners cannot plan their actions to accord with the Government's intentions.

Actors-network relationship

The Government is responsible for the overall land use planning and public consultation, establishment and review of policies and measures for promoting urban regeneration and preservation. The URA works closely with the Hong Kong Housing Society²⁹ (HKHS) and the Hong Kong Housing Authority³⁰ (HKHA). The HKHS shares the job of rehabilitation, implementing selected URA redevelopment projects as well as assisting in re-housing whilst the HKHA provides the necessary re-housing units.

The URA also works closely with the private sector. The URA may undertake redevelopment on its own or go into joint ventures with developers in redevelopment. Since land cost is the highest component in development in HK, containing the cost of land is important. The URA secured in the beginning a once and for all nil land premium³¹ to the Government for all its projects.

The URA also assembles sites for subsequent bidding by prospective joint venture developers. It buys properties and land at the market rate. When acquisition by agreement has reached 80% or more and further acquisition proves difficult, the URA may undertake compulsory purchase through the powers given under the URAO, providing favourable

²⁹ HKHS is a non-profit organisation, similar to housing associations in England, which is responsible for providing social housing to the needy.

³⁰ HKHA is a Government authority responsible for the development, redevelopment, maintenance and management of public housing in Hong Kong.

³¹ According to the Lands Department of the Hong Kong SAR, modifications, whether by modification letter or conditions of exchange, shall be granted at premium reflecting the difference between the "before" and "after" land value.

compensation to property/land owners³², and undertaking the re-housing of tenants³³. All these reduce the risk to developers, in particular because the URA will complete these processes before putting the projects out to tender to developers. Up to June 2008, among the 18 completed or nearly completed redevelopment projects, around 80% of the land titles were purchased by the URA while the remaining were obtained through land resumption due to problems such as unclear legal titles or untraceable owners.

The URA also works closely with property owners in engaging them in the redevelopment process, soliciting their views and providing adequate compensation.

It is suggested that owner participation, as experimented with in the former LDC projects, should be implemented in URA projects. Some suggest that the application ratio for applying for compulsory sale from owners to private developers should be lowered from 90% to 80%. The URS is considering the first suggestion and the second suggestion with requirement on age and condition of the development has recently been passed by the Legislative Council under an amendment bill.

The URA also works closely with the general public. It manages public expectations so as to minimise costs and misunderstandings. It conducts research on community opinions and conducts questionnaire surveys; it organises briefings, talks, seminars, community workshops and road shows. It communicates and works well with the public through maintaining a close liaison with District Councils and local organisations and such initiatives as the URA's community engagement strategy, programmes and projects. District Advisory Committees³⁴ and Social Service Teams³⁵ are set up to gauge public and local views as well as assist the residents in target renewal areas. The URA also conducts social impact assessments to identify those people affected by redevelopment projects and

³² Owners of vacant or tenanted residential properties are compensated at market price plus a supplementary allowance. Non-residential owners will be compensated at market price plus an allowance of 35% of the market price.

³³ Besides, residential or non-residential tenants are given an ex-gratia payment or an ex-gratia allowance.

³⁴ District Advisory Committees (DAC), comprising members from different walks of life, are established by the URA to reflect the views and aspirations of the local community and provide advice on urban renewal concerns at the district level. Six DACs have been established in major action areas namely Sham Shui Po, Yau Tsim Mong, Kwun Tong and Kowloon City on the Kowloon side and Wanchai, Central and Western on Hong Kong Island.

³⁵ the URA sets up urban renewal social services teams, which are made up of professional social workers, to provide assistance and counselling services to residents affected by its redevelopment projects. Social Service Teams have been established on the Kowloon side in Kwun Tong, Sham Shui Po, Yau Ma Tei, Tsim Sha Tsui, Mong Kok, Wong Tai Sin, Kowloon City and Tai Kok Tsui; and on Hong Kong side in Central and Western District.

carry out mitigation measures to help manage the process of change in the least disruptive manner.

5.6 Research Questions

Chapters 3 to 5 discussed the neo-classical economics and institutional theory. The neo-classical approach was adopted for the purpose of this research as it provides a straightforward and well-versed model that outlined the actions of developers in a normative sense. It forms a basis for easy understanding of developers major actions and considerations. Since developers are familiar with the normative models, the neo-classical theory serves as a basis and allows further exploration of their actual behaviour when combined with the subsequent conjoint survey. The Conjoint Analysis will unravel the major risks and risk management measures considered most important by developers. Key research questions relating to risk pricing and management that came out in the neo-classical model are :

- (a) what are the main risks of redevelopment considered by developers?
- (b) what are the risk management measures developers consider as most important and useful?
- (c) what are the relative importance of the main risks and risk management measures?
- (d) how do developers value the URA's actions and contribution to urban redevelopment?

5.7 Conclusion

To manage and reduce risk, developers can undertake or influence measures beyond mere calculation/prediction method. These can be measures aimed at the development process as explained in Millington (2000) and Fisher (2005).

This may also depend on the actions of the Authority, especially the Government. Adair et al. (1998, p.16) commented that:

“Reduction of risk is a key issue with the result that private sector investment depends on the facilitating role of the public sector”.

They call for the public sector to take a lead in confidence building measures, including a guaranteed minimum standard of infrastructure, clarity in public policy and processes, targeting of initiatives, simplified planning processes and land assembly.”

Nonetheless, “public policy can directly affect market pricing for good or ill through the extent to which it increases or diminishes the prevalence of risk” (Adams et al (2005), p. 50). State intervention might also involve red tape and bureaucracy, and therefore the laws, regulations and requirements of the Government will result in high transaction costs and thus would not be effective in solving market failure. There are often delays in making development control or appeal decisions thereby creating additional costs for developers. The discretion allowed in the development plans also makes the planning system unstable and uncertain, thereby deterring development.

Apart from refining rules and regulations set by Government and the community, developers could contemplate developing or influencing the development and improvement of actor-network relationships and establishing informal customs and conventions in the property market to make it closer to perfection.

Governments, in building up partnerships with stakeholders very often are “promoting the misallocation of resources” by further entrenching prevalent power and influence. Government may make concessions and compromises so as to obtain support from powerful groups in the market, or provide additional information to developers who know how the system works. Groups with resources and better knowledge may well lobby the Government and therefore obtain disproportionate resources or advantages.

The ensuing chapter will discuss the development process in Hong Kong and state intervention in the process to reduce risks. Subsequent chapters will discuss the survey of this study done through focus group/interviews and conjoint analysis to unravel the behavioural aspect of developers’ actions.

Chapter 6: Research methods – Focus Groups, Interviews and Conjoint Analysis

6.1 Introduction

This chapter will discuss the methodology used in this research. It starts off with a brief introduction about the limitations of previous research about decision-making of developers and the applicability of conjoint analysis in solving these limitations. The chapter then sets out the research aims and objectives, as well as the research questions. The subsequent section explains the methodological implications of the research, including the social research strategies, the epistemological and ontological aspects of the research. The later section discusses the choice of mixed methods research. Further discussions will be made on the research stages, with particular emphasis on the use of conjoint analysis. The chapter will round off by a discussion on the ethical considerations of this research.

Decision-making and Conjoint Analysis

It is worth first examining the previous research on the risks of redevelopment to understand the strengths and weaknesses of these research to discover what gap needs to be filled by this study.

Previous studies by Byrne, (1996), Darlow, (1987), Hertz, (1984), Issac, (1996) and Fisher et al (2006) have set out what might be described as the conventional wisdom in explaining and predicting developers' decision-making with regard to defined sources of risk. Byrne, (1996), Ratcliffe (2004) and Havard (2008) attempted to understand the factors affecting development. The results of these studies have been identified in Chapters 3 to 5.

However, application of these findings becomes more speculative as the discussion moves from the generally well-understood sources of risk (changes in economic growth or interest rates) to the less well-defined (for example, political influence or the influence of public opinion on the planning process). Part of the difficulty is that such sources of risk call into question the issue of probability that an event will happen and the severity of it. In terms of severity, perceptions are likely to differ between different types of development companies,

and perhaps developers³⁶. For example, one developer may have an altogether different view of the impact of public protest on the probability of achieving planning permission than another developer, even when identical sites or development proposals are considered.

Although the survey data in Fisher et al (2006) and Gallimore (1999) quantify the significance of the major factors affecting development, there are limitations as follows :

- These studies identified the major factors for development but did not refer specifically to redevelopment.
- Limited investigation was undertaken of the risks of redevelopment and the relative importance of these risks.
- None of the studies calculated the significance of these factors, i.e. the trade-offs relative to each other.
- Similarly, there has not been any research on the trade-offs of the factors that lead to project choices by developers in Hong Kong.

This study aims at bridging this gap in research on the development industry. The overriding aim of the study is analysing the relative importance and trade-offs amongst the detailed factors affecting the risk of redevelopment so as to chart out what risk management measures should be employed. The detailed research aims and objectives will be discussed in the subsequent section.

6.2 Research Aims and Objectives

This research concerns the risks of redevelopment for developers. It is understood that developers bear and manage a lot of risk in their actions. Redevelopment areas have often been stigmatised as particularly risky. There is a need for land assembly and property acquisition and this entails large upfront overhead expenses. Borrowing from banks will usually be required and the leverage ratio is generally high. All these add to the risks of redevelopment.

³⁶ The terms ‘developer’ and ‘development firm’ are used interchangeably to refer to the decision-making of a firm based mainly on one or a few dominant persons in the company or big companies with a concentration of power in some individuals; as well as for those for which decision-making is generally collective, based on the discussion by the company’s board.

Understanding developers' decisions on how to judge and manage risks would show how to encourage redevelopment through reduction of risk to developers.

As mentioned in Chapter 1, the theme of this research is to further the understanding of the risks of redevelopment in Hong Kong, in particular with reference to the impact on developers and whether by reducing developers' risk, more redevelopment schemes would be made financially viable. The research also aims to understand and improve any current action of the quango responsible for redevelopment and regeneration in Hong Kong, i.e. the URA, so as to minimise risks for developers and any new initiatives that the URA can take on board to reduce risk for developers and so accelerate the pace of redevelopment in Hong Kong.

The research objectives are to:

- (e) examine factors affecting developers' choice of redevelopment projects in Hong Kong (HK);
- (f) analyse the relative importance of these factors in affecting HK developers' perception of risk and choice of redevelopment projects;
- (g) analyse four factors, namely the impact of planning, the actions of the URA, profits, and uncertainty on redevelopment decisions of HK developers;
- (h) analyse the implications for policy direction of reducing the risk for developers in order to make redevelopment schemes in HK more viable.

This study now demonstrates how testable research questions are derived from these objectives.

Aspects of the research area

After a review of the current literature, the research areas and the relevant scope were identified and detailed as shown in Table 6.1. It forms the basis for the formulation of the research questions and for devising the methodological approach for the research.

Research Areas	Scope
Relationship between redevelopment and risks	<ul style="list-style-type: none"> - Describe and explain the development process and the property land market - Understand developers and other agents - Appreciation of developers' behaviour - Find out the main risks of redevelopment schemes - Obtain perceptions of redevelopment risk by different types of developers
Developers' pricing and management strategy on risks	<ul style="list-style-type: none"> - Compare and contrast the pricing methods employed by developers - Discuss the risk management measures for containing, reducing, sharing and transferring redevelopment risk
Redevelopment in Hong Kong	<ul style="list-style-type: none"> - Compare and contrast the different kinds of developers in Hong Kong - Understand the development process and redevelopment in Hong Kong - Appreciate the interaction of developers with the administration, including the planning, land and building aspects; green groups; interest groups; and the public - Explain the redevelopment risk in Hong Kong - Introduce the Quango: URA
The Actions of the URA on Redevelopment in Hong Kong	<ul style="list-style-type: none"> - Discuss the URA in Hong Kong: What is it? Its legal form. Joint ventures with developers. - Explain the redevelopment strategies, policies and projects of the URA. Impact of the URA's actions on risks to developers and response to risks faced by developers.

Table 6.1 Research Areas and Research Scope

The research areas and scope were introduced in the first part of the thesis, i.e. in Chapters 2 to 6. They include the general appreciation of the relationship between risk and redevelopment, the developers' pricing and management of risk as identified in different literature, and the redevelopment actions undertaken by the Government in the past three decades.

Apart from the ex-post factors affecting the risks of redevelopment to developers, such as macroeconomic conditions, market conditions, land assembly and planning, the research also unravels the ex-ante factors such as lease, relationship amongst stakeholders, etc., which will be discussed by presenting Hong Kong as a case study. The context of redevelopment in Hong Kong, in particular the organisations responsible for redevelopment such as the URA, and the actions of the URA in redevelopment in Hong Kong will also be discussed.

The geographical location of the study was confined to the city of Hong Kong. The subjects of the research are real estate developers with experience engaged in redevelopment in Hong Kong, both with and without experience working with the URA.

Once the research areas and scope were identified, it was necessary to draw up the research questions and identify the social research strategies, the research design and the research methods most suited to the subject of this study. This process is identified in Figure 6.2.

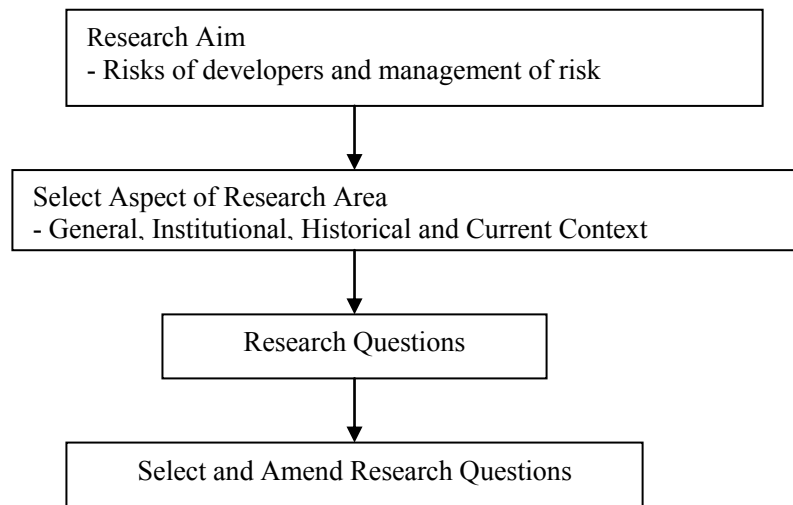


Figure 6.2 The Selection and Development of Research Questions (Based on Bryman (2008))

6.3 Research Questions

The main research questions were summarised in Table 6.3 and set out below :

Research Area	Research Questions
<ul style="list-style-type: none"> - Relationship between redevelopment and risk - Development process and the property land market - Developers and other agents - Appreciation of developers' behaviour - Main Risks of Redevelopment Schemes - Perception of redevelopment risk by different types of developers 	<ul style="list-style-type: none"> - What are the processes in redevelopment in Hong Kong? - What are the major risk factors in redevelopment in Hong Kong? - What are the attitudes of Hong Kong developers in the face of these risks? - Actions of other agencies that will affect risk for developers?
<ul style="list-style-type: none"> - Developers' pricing and management strategy on risks - Pricing methods employed by developers - Risk management measures for containing, reducing, sharing and transferring redevelopment risk 	<ul style="list-style-type: none"> - What are the decisions and behaviour of Hong Kong developers in making project choice in redevelopment? - How do developers identify and price risks? - Which pricing methods do developers use and how frequently are they employed? - What are the actions developers would deploy and favour to manage and reduce risk?
<ul style="list-style-type: none"> - The Actions of the URA on Redevelopment in Hong Kong 	<ul style="list-style-type: none"> - What actions does the URA deploy to manage and reduce risk? - What is the impact of the URA's actions on developers' pricing and management of risk? - How effective is the URA on impacting redevelopment? - What could the URA do to reduce risk for Hong Kong developers?

Table 6.3 Research Area and Research Questions

The identification and development of research questions form the basis for the formulation of the research design and research methods. The methods need to be able to unravel the attitude, behaviour and decisions of developers, as well as that of the URA. Figure 6.4 summarises the relationship between the research areas and the methodological implications.

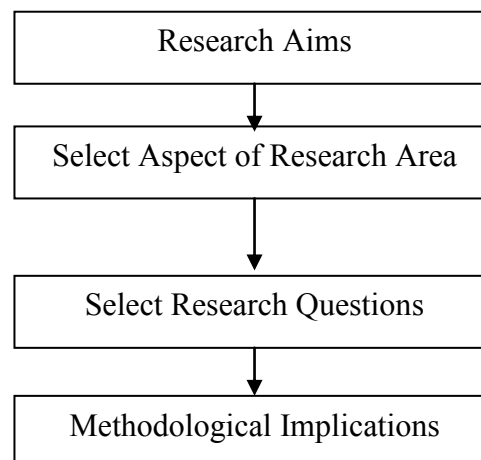


Figure 6.4 Relationship between Research Themes and Methodological Implications

6.4 The Methodological Implications of the Research

The methodological implications pertaining to the research questions require both general/broader (such as the identification of risk factors) and in-depth/detailed (such as interaction of risk factors and the behavioural aspects of developers' decisions) data and information. Both qualitative and quantitative methods need to be used.

Before further discussing the design methods employed to explain the research questions, the philosophical basis for the research is examined. This then leads onto a discussion of the quantitative and qualitative paradigms, and later the mixed methods approach which will allow triangulation of the data. The process is depicted in Figure 6.5.

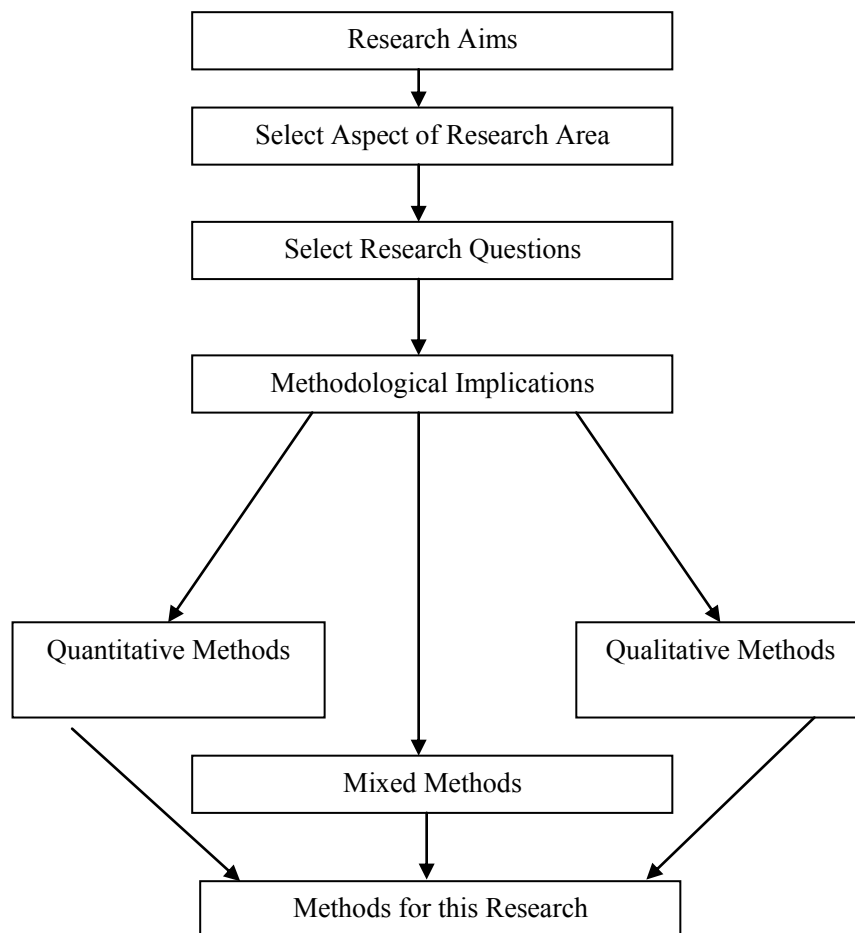


Figure 6.5 Identification of Research Methods

6.5 Social Research Strategies

Bryman (2008 p. 4) commented that ‘the practice of social research does not exist in a bubble.’ It is ‘closely tied to [social scientists’] visions of how social reality should be studied; and that ‘research data are invariably collected in relation to theory’.

Theory may ‘guide and influence the collection and analysis of data’ (Bryman, 2008). In so doing, theory precedes research (as in deductive methods or often in quantitative research). It may also emerge out of research (as in inductive methods or often in qualitative research). ‘Quantitative and qualitative research constitute different approaches to social investigation and carry with them important epistemological and ontological considerations’ (Bryman, 2008 p. 27). Before discussing the quantitative and qualitative divide and which method will be employed in this study, the following section will demonstrate the epistemological and ontological positions of this research.

6.5.1 Theory and Research

Theory is ‘an explanation of observed regularities’ (Bryman, 2008, p. 6), such as why a professional sportsman’s health will deteriorate faster than that of an amateur sportsman. Bryman differentiates between ‘grand theories’ and ‘middle-range theories’. Grand theories are those ‘which operate at a more abstract and general level’ such as poststructuralism, structuration theory, and so on. Middle-range theories operate at a more general level and in a more limited domain and include those in the courses of sociological theory. However, middle-range theories are applied to different aspects. For instance, neo-classical economic theory can be applied to economics research such as in land economics whilst the labour process theory is applied to the sociology of work (Bryman, 2008, p. 7).

Merton (1967), suggested that grand theories are so abstract that it would be difficult to test or draw inferences from them. They are therefore of little empirical use to social research. He considered that middle-range theories are ‘intermediate to general theories’ and are more relevant to empirical enquiry. They fall ‘somewhere between grand theories and empirical findings’.

Bryman (2008, p. 8) further commented that ‘theory’ is frequently used to mean the ‘background literature in an area of social enquiry’. This applies to research which is fact-

finding. However, theory may also be ‘relating to a topic that fuels the focus of an article or book and thereby acts as the equivalent of a theory’ or a ‘spur to an enquiry’. The theory acts as an impetus.

Although the current study is not spurred by theory, theory acts as an impetus. The research aims and questions are derived from a review of literature related to the development process, risks and types of developers. Reference was made to neo-classical economic theory, consumer decisions, consumer theory and methods of understanding decisions on choices. The literature review generates the research aims, aspects of research areas and research questions. Besides, economic theory related to consumer decisions is employed to underpin the research and help explore the research problems further.

As explained previously, the role of theory may guide and influence research but may also be a result of research. This is the difference between deductive and inductive research.

Deductive theory is when a researcher deduces a hypothesis from a theory or sets of theories that is then subject to empirical scrutiny. The concepts in the hypothesis need to be translated for data collection and empirical testing (Bryman, 2008, p.9). The hypothesis will either be confirmed and lead to revision of the theory or rejected. In this, theory and hypothesis precede the process of data collection and analysis.

The inductive approach is when theory is ‘the outcome of the research’ (Bryman, 2008, p. 11). A researcher infers the observations and findings from a theory. ‘The findings are fed back into the stock of theory and the research findings associated with a certain domain of enquiry’ (Bryman, 2008, p.9). Induction may entail a ‘modicum of deduction’ (Bryman, 2008, p.11). The theory generated needs to be tested to see if it will or will not hold. This is an iterative process, common in grounded theory, where the theory and the findings are repeatedly tested back and forth.

This research takes the inductive approach as the hypotheses are not developed from theories but from observation, shaped by theories. The research is intended to meet the research challenges by answering the research aims, objectives and research questions that are generated from the results of extensive literature review. However, neo-classical theory and consumer choice theory underpin this study to allow the researcher to understand

further and generalise the developers’ decision behaviour. Reference was also made to institutional theory to further understand firms’ behaviour.

The following section will discuss and explain the epistemological and ontological position of this research. Then, the quantitative and qualitative approaches to social science research that carry with them important epistemological and ontological considerations will be discussed.

6.5.2 Epistemology

Epistemological issues concern the question of ‘what is (or should be) regarded as acceptable knowledge in a discipline’ (Bryman, 2008, p.14). They ask the question of whether the social world can and should be studied according to the same principles accorded to the natural sciences as in positivism. In contrast, interpretivism considers that such an application of the scientific model is not appropriate but the study of the social world should require reflection on the distinctiveness of humans as against the natural order.

Positivism advocates the application of the methods of the natural sciences to the study of social reality and beyond. Its emphasis is to explain human behaviour (Bryman, 2008). The principles of positivism are detailed in Table 6.6.

<ol style="list-style-type: none">1. Only phenomena and hence knowledge confirmed by the senses can genuinely be warranted as knowledge (the principle of phenomenalism).2. The purpose of theory is to generate hypotheses that can be tested and that will thereby allow explanations of laws to be assessed (the principle of deductivism).3. Knowledge is arrived at through the gathering of facts that provide the basis for laws (the principle of inductivism).4. Science must (and presumably can) be conducted in a way that is value free (that is, objective).5. There is a clear distinction between scientific statements and normative statements and a belief that the former are the true domain of the scientist. This last principle is implied by the first because the truth or otherwise of normative statements cannot be confirmed by the senses.
Source: from Bryman (2008: p. 13)

Table 6.6 Positivism

Advocates of interpretivism suggest that the subject of social science research, which comprises people and their institutions, fundamentally differs from that of the natural sciences. It is contrasted to positivism in that it is ‘concerned with the theory and method of the interpretation of human action’ (Bryman, 2008, p. 15). The study of the social world

focus on the distinctiveness of humans rather than the natural order. Hermeneutics, drawn from theology, is concerned with the theory and method of the interpretation of human action. The emphasis is on understanding human action, not the forces deemed to act on it. It requires social scientists ‘to grasp the subjective meaning of social action...to gain access to people’s ‘common-sense thinking’ and ... to interpret their actions and their social world from their point of view’’ (Bryman, 2008, p. 16).

This research study is grounded in both positivism and interpretivism in terms of epistemology. The aim of the study is to find out about the decisions of developers. This is positivism. It further interprets and understands the actions of developers and does not simply explain the way actors interpret the social world. It studies developers’ decisions on project choice with respect to risks of redevelopment by answering how and why they take on some projects and not others, and why some are more risk-averse whilst others are more risk-loving. Developers are studied to understand their perceptions of and responses to the risks of redevelopment taking into account the current organisational context. This part is interpretivism.

6.5.3 Ontology

Ontology is ‘concerned with the nature of social entities’ (Bryman, 2008, p. 18). There are two streams – objectivism versus constructivism. For objectivism, the main focus is on whether or not social entities can and should be taken as objective, having a reality external to social actors. In contrast, constructivism considers whether or not social entities can and should be taken as social constructions, developed from the perceptions and actions of social actors.

Objectivism is an ontological position that considers social phenomena as external facts not within the reach of or being influenced by researchers. This position is concerned with objectivity and is related to and influenced by positivism in epistemology. For a development firm, objectivism assumes that the firm is a tangible object with rules and regulations, adopting procedures across the board that need to be completed. There is a division of labour where workers are assigned and appointed different roles that they need to fulfill and that they need to abide by the social order, rules and regulations.

Constructivism as an ontological position contends that organisations and culture are not givens and social actors are not external entities but can influence and fashion the social world. Strauss et al. (1973) as quoted in Bryman (2008, p. 20) called this a 'negotiated order' that can be worked at. Rules are no more than 'general understandings' (Strauss 1973, p. 308) to be agreed upon and negotiated. The social order is constantly changing. Culture is also in a 'continuous state of construction and reconstruction' ... There is an 'active role of individuals in the social construction of social reality' (Bryman, 2008, p.20).

The constructivist position in ontology is more appropriate to this research. The developers as social entities are not simply following the social order and they are not external to the interaction with the other actors and the institutional context. There are rules, regulations and procedures to be followed, heeded and established. However, these are in constant review and change in accordance with the evolution of the institutional context they are in, the action and interaction of other entities such as other developers, landowners and Government officials. The social world in which developers are engaged in is constantly changing. The macroeconomic and market conditions are volatile; the relationship with Government is one of constant negotiation, concession, intervention and evolution. There are diverging views and dialogues leading to actions and reactions from institutions and actors.

At this point, the epistemological and ontological position of this research is established. The following will discuss the nature of the quantitative and qualitative methods and the effects of epistemology and ontology on them.

6.6 Quantitative and Qualitative Approaches

Quantitative research as a method of collection and analysis of data emphasises quantification. It is generally related to positivism and associated with a deductive approach to theory and research. It sees the social world as objective and external to the actors. It is mostly employed for testing theories.

Qualitative research in contrast emphasises words. It is generally related to interpretivism in which the researcher and the actors in the research interpret the social world. It is associated with a constantly changing social entity and popular in an inductive approach. It is for generation rather than testing of theories.

Table 6.7 adapted from (Bryman, 2008, p.22) will explain the fundamental differences between quantitative and qualitative research strategies.

	Quantitative	Qualitative
Principal orientation to the role of theory in relation to research	Deductive; testing of theory	Inductive; generation of theory
Epistemological orientation	Natural science model, in particular positivism	Interpretivism
Ontological orientation	Objectivism	Constructivism

The main quantitative and qualitative research methods are outlined in Table 6.8 below.

Quantitative Methods	Qualitative Methods
Sampling Structured Interviews Self-completion Questionnaires Structured Observation Content Analysis Secondary Analysis and Official Statistics	Ethnography Participant observation Qualitative interviews Focus Groups Discourse and Conversation analysis Personal documents, e.g. diaries, letters, autobiographies, and visual objects

Table 6.8 The main quantitative and qualitative research methods (Own compilation based on Bryman (2008))

However, the distinction between quantitative and qualitative research may not be so clear cut. There are overlaps between the two methods and they are not so bound by their epistemological and ontological positions, which are simply tendencies. For example, qualitative research can contain elements of positivism, i.e. the natural science model, whilst quantitative research may exhibit a tendency towards interpretivism.

Positivism is not the only epistemological position. Realism³⁷ provides an alternative position. Qualitative research also exhibits a tendency towards the natural science model and may attach much importance to direct contact with social reality in its investigation, referred to by some as ‘covert positivism’ (Bryman, 2008, p.589). Extended investigation and contact also allow interpretation. In contrast, quantitative research such as questionnaires may ‘relate poorly to people’s actual behaviour’ (Bryman, 2008, p.594).

³⁷ Bhaskar (1989, p. 4) - (Bryman, 2008, p. 589)) suggested the notion of ‘critical realism’ but did not take the ontological position of either constructivism or objectivism. It considers that ‘the social world is reproduced and transformed in daily life’ and social research is ‘to construct hypotheses about such mechanisms and seek out their effects.’

Qualitative research can also investigate ‘specific, tightly defined research questions of the kind normally associated with a natural science model’ (Bryman, 2008, p. 589). Qualitative research may not just develop hypotheses but be employed to test them after the hypotheses are decided upon. However, the interpretation of findings in quantitative surveys may generate theories and concepts, too.

Apart from qualitative research, quantitative research can also study meaning. Quantitative research relating to attitudes in social surveys can interpret the reasons and meanings too. Whichever research method is better at interpretation depends on respondent validation, which is rarely undertaken.

The truth is, most research employs both quantitative and qualitative research methods. These lead us to understand that the divide between quantitative and qualitative may not be as wide and rigid and this introduces the idea of mixed methods research.

The following will explain mixed research methods. Conjoint analysis, which will be employed in this study, bridges the quantitative and qualitative divide and will be explained in the following sections.

6.7 Mixed Methods Research

Mixed methods research combines quantitative and qualitative research within a single research project. Some believe that combining the two methods will incorporate the various strengths and offset some of the weaknesses of each. Others argue against such mixed research methods because they carry different epistemological commitments and belong to different paradigms³⁸.

³⁸ The embedded methods argument suggests that research methods are rooted in different epistemological and ontological commitments. These are irreconcilable views about how social reality should be studied. They are not complementary. For instance, a questionnaire is consistent with positivism rather than interpretivism. Combining the quantitative and qualitative research methods ignores the underlying assumptions behind these research methods and ‘transforms qualitative inquiry into a procedural variation of quantitative inquiry’ (Heshusius, 1986, p. 8). The paradigm argument suggests that quantitative and qualitative research have different paradigms and their epistemological positions incompatible. Integration is only within a single paradigm and very superficial. Nonetheless, Kuhn (1970) contended that they are by no means different paradigms as there is commonality and overlap between the two.

Bryman (2008, p. 608 and 609) undertook a content analysis of journal articles reporting the findings of mixed methods research and found nineteen ways of combining quantitative and qualitative research as illustrated in Table 6.9.

A	Offset – refers to the suggestion that the research methods associated with both quantitative and qualitative research have their own strengths and weaknesses so that combining them allows the researcher to offset their weaknesses to draw on the strengths of both.
B	Explanation – one of the two research methods is used to help explain findings generated by the other.
C	Completeness – refers to the notion that the researcher can bring together a more comprehensive account of the area of enquiry in which he or she is interested if both quantitative and qualitative research is employed.
D	Context – refers to cases in which the combination is rationalised in terms of qualitative research providing contextual understanding coupled with either generalisable, externally valid findings or broad relationships among variables uncovered through a survey.
E	Different research questions - this is the argument that quantitative and qualitative research can each answer different research questions.
F	Instrument development – refers to contexts in which qualitative research is employed to develop questionnaire and scale items, for example, so that better wording or more comprehensive closed answers can be generated.
G	Confirm and discover – this entails using qualitative data to generate hypotheses and using quantitative research to test them within a single project.
H	Triangulation or greater validity – refers to the traditional view that quantitative and qualitative research might be combined to triangulate findings in order that they may be mutually corroborated. If the term was used as a synonym for integrating quantitative and qualitative research, it is not considered triangulation.
I	Process – quantitative research provides an account of structures in social life but qualitative research provides a sense of process.
J	Unexpected results – refers to the suggestion that quantitative and qualitative research can be fruitfully combined when one generates surprising results that can be understood by employing the other.
K	Sampling – refers to situations in which one approach is used to facilitate the sampling of respondents or cases.
L	Credibility – refers to the suggestion that employing both approaches enhances the integrity of findings.
M	Illustration – refers to the use of qualitative data to illustrate quantitative findings, often referred to as putting ‘meat on the bones’ of ‘dry’ quantitative findings.
N	Utility or improving the usefulness of findings – refers to a suggestion, which is more likely to be prominent among articles with an applied focus, that combining the two approaches will be more useful to practitioners and others.
O	Diversity of views – this includes two slightly different rationales – namely, combining researchers’ and participants’ perspectives through quantitative and qualitative research respectively and uncovering relationships between variables through quantitative research while also revealing meaning among research participants through qualitative research.

P	Enhancement or building upon quantitative/qualitative findings – this entails a reference to making more of or augmenting either quantitative or qualitative findings by gathering data using a qualitative or quantitative research approach.
Source: Bryman (2006a)	

Table 6.9 Ways of combining quantitative and qualitative research

6.8 Pragmatic Reasons for Mixing Methods

The pragmatic reasons justifying the mixing of methods in this research are largely due to the conceptual approach and the attachment of credibility to the findings. Apart from the pragmatic reasons, the epistemological and ontological positions of this research also have a strong effect on the choice of research methods.

6.8.1 The Conceptual Approach to Research

This research has two main aims. The first is to understand developers' decisions in the choice of redevelopment projects taking into account various risks. It is constructivism in action, trying to explain the decisions of developers' choice of redevelopment projects. It also aims at unraveling the behavioural patterns of developers' decisions. Although the intention is to generate hypotheses to be tested, the intention is not to build up laws to be assessed. Rather, its emphasis is on understanding human action, not the forces deemed to act on it. The researcher is providing an interpretation of developers' interpretations of the property market as a social entity. As such, the research also takes on an epistemologically interpretivist stance.

It is therefore a study of the social world. In this research, each stage of the redevelopment processes in Hong Kong has been identified with the respective risk factors highlighted.

The combination of constructivism with interpretivism for this mixed research method of conjoint analysis indeed bridges the divide between the two epistemological stances as well as the quantitative and qualitative divide. The mechanism of how conjoint analysis works will be explained in later sections.

For the ontological position, the research takes the view that the nature of social entities is not an external reality but constantly being constructed and reconstructed, in an evolution through time, affected by other social entities and the actions of social actors. Society is an

emergent rather than external reality, not acting or constraining individuals, but people are affected and can affect the social entity.

The reasons for the mixed research methods in this research, taking the Bryman's stance in Table 6.10, are mainly related to:

- (A) Offset
- (B) Explanation

The rationale for redevelopment choice by Hong Kong developers as understood from the interviews and focus group, which is qualitative in nature, provides the basis for the quantitative methods of conjoint analysis. As such, the research methods associated with both quantitative and qualitative research have their own strengths and weaknesses and combining them allowed the researcher to offset their weaknesses and draw on the strengths of both.

- (C) Completeness
- (D) Context

The qualitative interviews and focus group provide the contextual understanding and generalisable, externally valid findings or broad relationships among variables (uncovered through the survey) for the later design of the conjoint analysis.

The interviews and focus group provide a deeper understanding of real-world risk pricing by developers. The main research method of conjoint analysis used to unravel the behavioural aspects of developers in project choice is developed out of the information provided in the interviews and focus group.

As such, employing the quantitative conjoint analysis together with the qualitative interviews and focus group can bring together a more comprehensive account of the area of enquiry in which the researcher is interested.

- (E) Different research questions
- (F) Instrument development
- (G) Confirm and discover

For this research, the qualitative research (using interviews and a focus group) answers the research questions on pricing methods and risk management measures and the quantitative approach of conjoint analysis answers questions related to the risks of redevelopment that affect the project choice of developers.

In addition, the qualitative interviews and focus group research methods are employed to develop a survey in the form of the conjoint analysis, by highlighting the major risk factors affecting redevelopment project choice and provided better wording or generated more comprehensive closed answers.

The content of the qualitative information from the interviews and focus group also helped to generate hypotheses for testing in the quantitative research of the conjoint analysis within this research project.

The quantitative and qualitative methods employed to answer the research questions are outlined above and in the table below. The section further below will explain the process of the research.

For this research, the suitability of the use of quantitative or quantitative methods is analysed in Table 6.11.

	Questions	What decisions and behaviour of developers are explained and explored?	How should it be looked at?
1	Major risks factors and processes that are identified by the researcher and discussed in the research?	<ul style="list-style-type: none"> - Risk reduced redevelopment viability. - Knowing the main redevelopment risks help understand how they can be reduced. - Current risks riddling redevelopment include: <ol style="list-style-type: none"> 1. Project-specific risks <ul style="list-style-type: none"> - Acquisition; - Planning; - Construction; - Disposal. 2. Risks associated with economic environment <ul style="list-style-type: none"> - Interest rate; - Inflation rate; - Market condition. 3. Timing. 4. Stakeholders' actions e.g. Government, Public, Interest Groups 5. Information Provision. 	<ul style="list-style-type: none"> - <i>Literature review</i> on the main risks of redevelopment to developers. - A <i>focus group and several interviews</i> to ascertain how significant these main redevelopment risks are at present to developers in HK. - A <i>conjoint analysis</i> to understand the developers' trade-off of different risks of redevelopment.
2	<p>How do developers identify and price risks?</p> <p>Which are the pricing methods developers use and how frequently are they employed?</p> <p>What are the actions developers deploy to manage and reduce risk?</p>	<ul style="list-style-type: none"> - Developers generally require a higher yield from redevelopment to compensate for risk. How do they price the redevelopment risks involved? - Amongst the developers, some are more receptive to taking risks whilst others are relatively risk-averse. How do they respectively 	<ul style="list-style-type: none"> - <i>Literature review</i> on the developers' pricing and risk management strategy regarding redevelopment – read property development textbooks and latest journal articles. - <i>Interviews and focus groups</i> with developers in HK to understand the different

	Questions	What decisions and behaviour of developers are explained and explored?	How should it be looked at?
		manage redevelopment risks?	<p>considerations they have in pricing and managing risks.</p> <ul style="list-style-type: none"> - A <i>conjoint analysis</i> to understand the developers' trade-off of different risk management measures of redevelopment.
3	<p>What are the effects of Government policies on redevelopment?</p> <p>Compare and contrast the effectiveness of the URA and the LDC on impacting redevelopment.</p>	<ul style="list-style-type: none"> - Policies and work of the Government and the URA that aim at directly and indirectly impacting on redevelopment. - The URA comes into joint venture with developers on redevelopment schemes. It also partners with other agencies to work on redevelopment. - What are the impact on developers' pricing and management of risk? 	<ul style="list-style-type: none"> - Background reading of academic papers, reports, news <i>and</i> other sources on URA policies and initiatives. - In the <i>focus group and interviews</i>, seek developers' views on the work of the URA. How far and in what ways is the URA (a) transferring and reducing risk or (b) increasing and passing on risk to developers?
4	<p>What are the actions the URA deploy to manage and reduce risk?</p> <p>What are the impacts of the URA on developers' pricing and management of risk?</p> <p>What is the way forward for the URA?</p>	<ul style="list-style-type: none"> - Assess areas of improvement for the URA in reducing developers' redevelopment risks as concluded in (3) above. - Important to assess feasibility and discuss limitations. 	<ul style="list-style-type: none"> - Interviews with developers in HK. Ascertain their comments on the URA's actions and the future scope of the URA that can help reduce risks to developers.

Table 6.10 Research Questions and the choice of research methods in relation to the Methodological Implications

6.8.2 Assumptions

The conjoint interviews made the assumption that the development would be a residential flat development which was relatively less heterogeneous compared to a commercial development such as offices and/or retail spaces. Besides, the respondents were those at top management level making decisions for redevelopment choice in the respective companies. The intention was to unravel generalisable outcomes on developers' project choice in redevelopment in view of the risks.

6.8.3 Unravelling the behavioural decision of developers

To understand Hong Kong developers' behavioural decisions in pricing redevelopment and choosing projects in view of the risks involved, a trade-off exercise in the form of a quantitative analysis would be needed. This entailed quantitative research with data collection in the form of conjoint trade-offs of different decision makers in development firms in Hong Kong. Logit regression has been employed to analyse the data.

Qualitative research in the form of interviews and a focus group has been undertaken to design the study (i.e. the conjoint questionnaire).

6.9 The Research Stages

The research was divided into two major stages adopting what Bryman (2008) has outlined in Figure 6.12 and Figure 16.1 of his book.

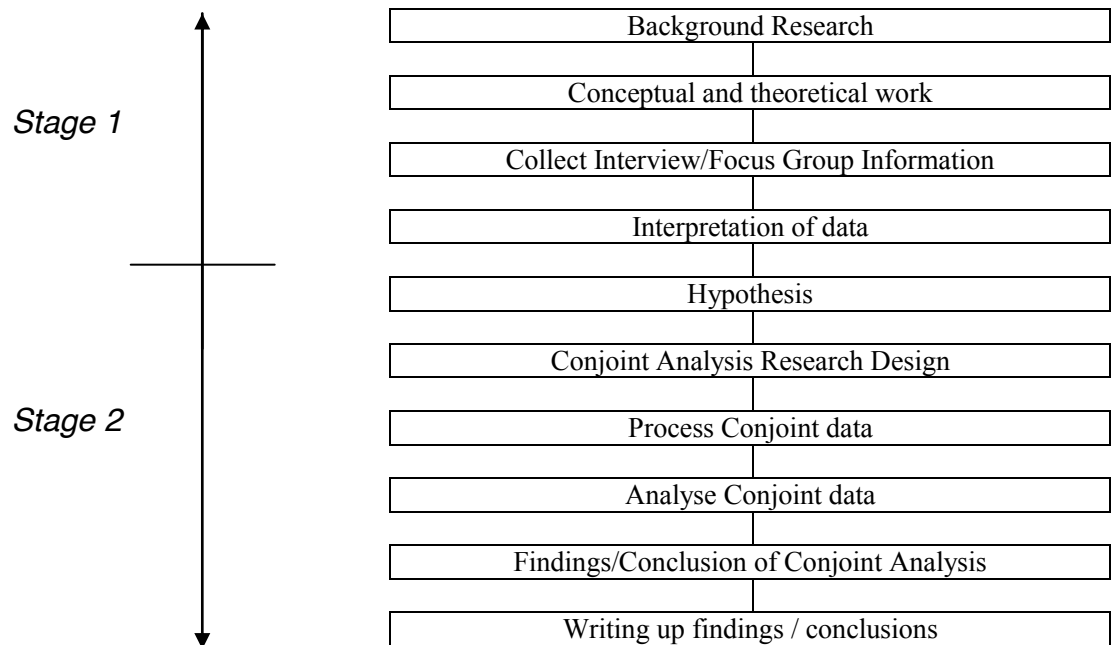


Figure 6.12 Major stages of the Research

6.10 Stage I: Background Research

Literature reviews were conducted in the initial stage to understand the general risks affecting developers' development project choice and profits as well as to understand how they handle risk. Keywords were typed to search through the University library catalogues and websites such as the common search engines 'Google' and 'Yahoo'. The bibliography sections of the articles on risks of developers were recorded for further reading.

The research aims and questions for this PhD research were formed from such background research.

6.11 Stage II: Field Work – Focus Groups/Interviews

The first stage of data collection was to engage private developers in a focus group and interviews to discuss the major risks of redevelopment and the risk management methods

employed. The intention was also to analyse their trade-off of different risk factors and risk management measures through conjoint interviews in a subsequent stage of the research.

Focus Group and Interviews

A focus group coupled with several one-to-one face-to-face interviews were conducted to obtain the developers' thinking about risks of redevelopment, pricing methods, risk management measures, the URA's actions in reducing or adding to developers' risks, and the application of these to the Hong Kong context.

A focus group is 'a carefully planned discussion, designed to obtain the perceptions of the group members on a defined area of interest' (Langford, and McDonagh, 2003, p. 2). Interviews, in contrast, are conducted between the interviewer and interviewees.

A focus group together with several interviews were considered a suitable method as they allow an open discussion from different angles, interaction and synergy of participants and a free flow of ideas that could not easily be achieved in an interview. To avoid leakage of sensitive company information, it was decided that a meeting of personnel from the same company would be formed for the focus group instead of mixing those from different companies. They are more flexible in asking and answering questions, even if they are highly structured with questions and the flow of the process pre-defined. The results allowed detailed and in-depth discussions.

One of the reasons for choosing a combination of a focus group and several interviews was to cut down on the resource input, in terms of time and costs, in preparation. Another reason was that it reflected the difficulty to find a time that suit all respondents and therefore more than one focus group for all respondents would have been difficult to arrange. Interviews also allowed confidentiality in collection of respondents' information and therefore may be welcomed by some.

For the focus group and interviews, the target groups from which information was collected were:

- (a) middle to top management in the developer companies;
- (b) the professionals helping these developers make decisions;

(c) middle to top management in the URA.

In planning for the focus group and interviews, consideration was given to available resources including time availability, budget, skills, expertise in handling group discussions, any training that needed to be undertaken, whether or not fees would be paid to the participants, whether refreshments would be provided, administration costs, e.g. producing letters, stamps, printing, photocopying, receptionists, a professional moderator and equipment.

Care was taken to recruit the most appropriate people. As explained earlier, it was decided that personal contacts would be used as basis to bring in more group members. Once the prospective group members had been finalised, email invitations were sent to them seeking their participation. Four managers from the same company responded positively and three others including one from the Government also gave positive feedback. This was in essence like purposive sampling, i.e. selecting participants who had a similar background.

Since one of the managers from the same company could not join the other three for the focus group due to a clash with his scheduled holiday (despite twice soliciting his availability for another time), it was therefore decided that only three of the managers from the same company would come to a focus group and that the four other individuals would be interviewed on a one-to-one basis.

This manager and the other three developers were involved in separate one-to-one interviews. The interviews will be explained in the ensuing section.

In October 2007, a focus group comprising three persons working for a development firm followed by four one-to-one interviews with a total of seven individuals who are managers in the same development firm were conducted.

The focus group comprised three managers of one of the top³⁹ property development firms. One of the managers was on a planning stream, another on a valuation and the third on a development stream. Two of them are surveyors whilst one is a town planner. All of them

³⁹ 'Top development firms' is in terms of circulation of shares in the Hong Kong Stock Exchange.

report directly to the directors of the company and are in the decision-making team in their company.

The decision to include three managers in different streams from the same company was partly due to the ease of forming the group that represents different disciplines in redevelopment, the ability to allow an open discussion from different angles and a free flow of ideas that cannot easily be achieved in a meeting with a mix of personnel from different companies who are possibly rivals and worried about leakage of sensitive information. Apart from making the participants feel comfortable about sharing their knowledge and comments, it also helped reduce the time needed to warm up.

The group of three from different streams of redevelopment allowed a synergy of ideas looking at redevelopment from different aspects of the process and therefore ensured that a variety of ideas were brought out.

The interviews and the focus group are to obtain background information on developers' decision-making, the main current issues and practices in redevelopment in Hong Kong, and the developers' views on risk management measures. The interviewees were asked further about their comments on each of the research questions.

Timescale

After face-to-face discussions with the supervisors, email correspondence with them was used to polish the questions in the focus group guide. The process took some three months. Piloting was done soon after that. Revisions to the questions in the focus group guide were made subsequent to that. It was decided that the focus group and the interviews should be completed by Fall 2007 to facilitate further discussion and investigation. This meant it was necessary to conduct a focus group and four interviews in the same month, i.e. in October 2007.

(a) the characteristics of the focus group

Negotiating for access to respondents was an important issue. One of the staff in a developers' firm was asked about the culture of those working in the development industry and how could access be gained to prospective respondents. Contacts were drawn up from

the Real Estate Developers' Association, professionals in the developers' firms who were known to the researcher, and through contacts in the professional institutes.

Access was denied by one person, but this person later agreed to be interviewed on a one-to-one basis.

(b) planning the research, i.e. specifying objectives, user groups, costs

It was decided that a single session of one focus group and several one-to-one interviews be conducted in the exploratory stage to facilitate the creation of a subsequent design of the interviews for the research instrument called conjoint analysis.

The purpose and intended outcome of the research was to understand the issues and factors currently affecting developers' decisions, the weight they assign to the respective factors and how companies' decision-makers managed risks. In particular, three aspects were explored at the focus group, i.e. the risks associated with redevelopment, the URA's actions and risk management measures.

Semi-structured questions were carefully prepared as a topic guide to stimulate and facilitate comments and responses in order to explore further the research topic. Such semi-structured interviews and the focus group allowed exploration of the behaviour of developers and enabled the researcher dig deeper into their perceptions, hidden thinking and the actions they would take in different scenarios. These questions followed the research aims and objectives and the hypothesis. The requirements are summarised in the following:

- questions needed to be easy to understand, with familiar wording and topics; and
- the research aims and objectives needed to be focused so that participants' views should not be influenced by the moderator's comments or judgment. There also needed to be a balance between control and letting the discussion flow naturally.

(c) Contacting Participants

Since the focus group participants were recruited through the researcher's own initiative and some by personal contact, the researcher contacted each of the focus group participants

by phone initially so provide a personal touch. This was followed up by emails with CV and other details about the research being undertaken and the purpose of the focus group.

Only one focus group was organised. Before contacting participants, the length of the sessions was made known to the participants as the focus group would be conducted over lunch hour between 12:45pm and 2:00pm in a quiet local Chinese Restaurant. They were also informed of the number of participants in the group and an outline of the main activities involved.

Some general questions about redevelopment risk as evident from textbooks were asked at the beginning as an ice-breaker, so as not to intimidate the participants and allow the time needed for participants to warm up to understand and consider the topics. The structure of the session was determined at the outset, but the flow of the questions in the focus group guide was set only as a reference. It was intended that the researcher/moderator would maintain the flow of the discussion so that the more important questions would be asked at the earlier stage. Some of the questions were ready to be discarded if the session ran on too long so as to allow participants to go deeper into the discussion and to avoid fatigue on the part of the participants.

(d) The day of the focus group

On the day of the focus group, when all the participants arrived, name cards were exchanged so as to keep the contact details of each of them. The main task of the researcher/moderator during the focus group was to conduct and facilitate the discussion through the selected topics. The focus group guide determined the content and organization of the session, but flexibility was allowed by the moderator. This helped especially as the researcher/moderator was a novice in leading focus groups. Some of the questions were prepared for possible non-response or little response from the participants. As discussed earlier, the topics were linked to each other.

The content was made known as each participant was provided with a focus group guide before the meeting. At the beginning of the focus group, participants were informed of the objectives of the focus group, the topics to be covered, and the time allowed for each activity.

At one point, discussions diverged from the focus and centred first on overseas planning as compared to the practice in Hong Kong, and after some discussion on other topics, later focus again on the dissatisfaction with the planning system. The moderator tried to bring the direction of discussion back to the other topics in the focus group guide so that a rich discussion would take place instead of being tilted mainly towards planning, though noting that the change in the statutory planning practice two years before the focus group had created some concerns on the part of the developers. The moderator was very aware of managing the time when the participants were discussing each topic so that the intended topics to be covered i.e. those related to the risk pricing and risk management measures would not be missed out or discussions prove too thin due to lack of time. Participants were generally very open in their discussions with all of them contributing their own knowledge.

Organising and Conducting the Interviews

As for the interviews, two of the four interviewees were respondents to the questionnaire whilst the other two were working in the development industry. Emails were sent out to these interviewees inviting them to the one-to-one interviews. Follow-up phone calls were made to confirm the date, time and venue. All of them accepted the invitation. The interviews all took place in the interviewees' respective offices.

The same questions in the focus group guide were used for the discussion with these four interviewees to maintain consistency in the questions asked so as to gauge their views and facilitate the management and analysis of the information collected for the subsequent design of the conjoint interviews.

During the interviews, interviewees were asked the questions in the guide according to the sequence in the guide. However, some adjustments were made in the order to tie in with the comments raised by the interviewees.

Appendices I and II set out the Uses, Advantages and Disadvantages of Focus Groups, as well as details of the logistics of the focus group and interviews respectively.

As mentioned, developers may consider their risk pricing and project choice are commercially sensitive information. Since developers generally operate with high

confidentiality to avoid leakage of sensitive company information, the use of the above-mentioned methods would not give biased results.

Nonetheless, due to the limitations set out in the table above, it was decided at the outset that the focus group should be only a preliminary method of seeking developers' initial views to facilitate the researcher to build on the full and advanced methodology – conjoint analysis, which is a quantitative analysis that can understand deeper developers' decisions and behaviour through obtaining and analysing probabilities and trade-offs. There is a danger of getting conjoint questionnaire wrong due to poor prior information and understanding and therefore the need for a focus group and interviews prior to designing the conjoint analysis.

The next section will discuss the main research method: the conjoint analysis.

6.12 Rationale for using conjoint analysis in this research

There is a clear methodological difficulty in testing the ideas and objectives set out in Section 6.2 above because the perceptions and decisions of developers are not readily measurable. Developers also interact with the outside environment when making decisions. This environment is not easy to understand, quantify and collect data on. There is a wide array of factors. Each development is unique. The decision process is obscured since it is only the transaction data which are available to outsiders. There is a lack of actual data and information.

In addition, the design of any direct attempt to measure or re-create perceptions and decision-making processes must account for the possibility that respondents will not necessarily have a clear and settled view of their own perceptions about the sources and likely severity of risk. It is difficult to collect data and information about developers' decisions because developers are human beings with subjective behaviour and attitudes that are hard to be measured. They will make trade-offs within the organisation internally or may even be the decision-maker making his/her own decision for the whole company.

These factors suggest that a carefully designed methodology is required and that this should approach the problem in a relatively subtle way, seeking to infer rather than simply asking for a statement or simplistic measurement of perception of risk. For this reason, the

main part of the methodology chosen involves the use of a form of analysis that has become known as “conjoint” analysis.

6.12.1 Methodology - The constraint of questionnaires

Conjoint analysis as a research tool is unique in bringing together qualitative and quantitative evidence, in this case, from decision-makers in development firms. It analyses the subtle trade-offs of qualitative factors affecting redevelopment risks in Hong Kong by measuring the probability of choice. Measurement is vital to understand the magnitude of importance between different choices. Trade-offs can allow deduction of behaviour in a quantitative approach.

Conjoint interviews based on the design, taking on board factors identified in the focus group, were conducted to collect data regarding the trade-offs between different major factors. These data were analysed using logit regression to understand the correlation and the trade-offs of the factors, their relative importance and the implications for the direction of future policy. More details on this will follow in the second half of the chapter.

The following explains the reasons for choosing conjoint analysis as a research tool as opposed to other qualitative/quantitative methods. Qualitative methods are favourable for in-depth understanding of behaviour. These may include examining secondary information sources, obtaining the ideas and opinions of developers through brainstorming in focus groups and one-to-one interviews. Secondary data or information are hard to collect due to the lack of such research in the past. The most common quantitative method is a survey or questionnaire to collect data followed by statistical analysis of the results. For these ordinary survey questions, the respondent answer questions one at a time, which is easier to manage mentally but would not challenge the respondent to make trade-offs or prioritise. Besides, focus groups and interviews give large amount of qualitative information that will not allow prioritisation of the risk factors.

For the above-mentioned quantitative and qualitative methods, we have identified their inability to prioritise and make trade-offs. The respondents may present as many favourable factors to them as possible to advance their interests. They often indicate everything is important. They may also respond with an intention to influence policy direction. It is therefore important to use a method that forces respondents to make choices

based on mutually exclusive options. Ranking may be possible but the ordinal scale will mean that some information will be lost.

Monness (2008) compared ‘a survey and a conjoint study’ by using the data from research involving 26 respondents between 2002 and 2004 on ‘the future vision of water intermediaries’. The research asked water intermediaries⁴⁰ about their future vision. The result of one conjoint study consisting of four attributes is contrasted with the survey of five corresponding questions.

The results of Monness’ (2008) study have interesting insights for the research reported in this thesis. Overall, the analyses do not give comparable results to the relative importance of the four attributes. The survey results do not prioritise the attributes as ‘each attribute is equally important or equally not important’ and ‘no attribute is in competition with other attributes’. The mean of all questions are in the range of 3.04 to 3.38, except one question with a mean of 4.23. When grouping attributes, it was found that ‘slightly opposite questions do not trigger opposite opinions’. Conjoint analysis, however, allows forced trade-offs between attributes. When grouping, the results differ significantly, but it is not certain which gives more accurate results. Nonetheless, this only shows that design is very important.

The ensuing section will discuss what is conjoint analysis, its evolution up to recently and its application in research.

Choice-based Conjoint Analysis

Choice-based Conjoint Analysis (CBC) is a kind of compensatory model for measuring, analysing and predicting both decision-making behaviour and consumers’ purchase decisions through finding out the part-worths of different attributes/levels of a concept. These part-worths are then added up, averaged or individually analysed. The idea is to deduce people’s actual trade-offs between different concepts or features of a concept.

⁴⁰ defined as ‘organisations that act in-between the traditional relationships between utilities, regulators and consumers to enable the uptake of new technologies and changed social practices within the production-consumption relationship to reshape the intensity, timing and level of water use and wastewater production’

In CBC, concepts are presented side by side and respondents have to choose amongst the concepts, but a ‘none’ option is also provided. CBC is administered using a computer and respondents answer by pointing and clicking the mouse within the concept box.

Developers are asked to choose among the options as outlined in the typical CBC presented below :

	1	2	4
Developer	A	B	None. I wouldn't accept any of these options.
Yield	5%	7%	
Lease Aspect	From own land bank	Land Assembly through intermediaries	
Planning Aspect	Planning Permission Expected without Delay	Planning Permission problematic	

Each option is a development scheme with combination of scenarios of various factors. The choice will be considered in an aggregate-level analysis and will measure the interactions amongst the factors. When developers choose among concepts, the process resembles the real world decision-making process by being forced to make judgments between the competing schemes. It is therefore more realistic. Whilst the options tell the share between them, the “none” option is included to deal the volume issue.

CBC may be in the form of an orthogonal design, i.e. a single version of the questionnaire for all respondents. The current research is also orthogonal in design. This yields maximum efficiency in measuring the main effects and interactions. However, different groups can also receive different CBC questionnaire versions but they are less efficient (loss of efficiency in the range of about 5 to 10%) than orthogonal design.

6.12.2 Alternative methods of measuring, analysing and predicting both decision-making behaviour and consumers' purchase decisions

Chapter 4 discussed the consumer choice theory and its relation to the risk pricing of developers. There are two major choice models – the compensatory model and non-compensatory models.

For the compensatory model, purchasers consider all the attributes of a product/service and trade off by adding all positive attributes then subtracting all negative attributes to arrive at a choice with the largest number of net positive attributes. This can be done manually or using computers to calculate the trade-offs. Relative weights may be given to the attributes as some attributes may be considered more important than others. The total score will reveal which decision to make. It is called the compensatory model 'because a shortfall on one attribute may be compensated by a good rating on another attribute' (Sheth, 2008, p. 294).

For the non-compensatory model, 'four (approaches) are most common and useful (Sheth, 2008, p. 294), namely conjunctive, disjunctive, lexicographic models and elimination by aspects.

Purchasers using the conjunctive model are effectively processing by one brand/one choice at a time. It will first set the minimum threshold on all important attributes. Those attributes failing the threshold will not be considered. If more than one attribute passes the threshold, the alternative choice model will be employed to eliminate the choices. If all attributes fail the threshold, the purchaser will either revise his criteria, use another decision model, or collect further information on alternative choices. It is suitable for both supplier choice and choice of products/services. For instance, a merchandiser sourcing goods such as construction materials may use this method to choose from amongst a multitude of different suppliers the materials they would like to take up for the merchandiser's company for further supply to developers or construction companies.

For the disjunctive model, trade-offs will be made between attributes of a choice. This model arises because a purchaser may be willing to trade one attribute off with another. For instance, a developer may be willing to trade-off the waiver of the premium payable to the Government with a rise in expected profits within a certain range. The difference between this and the compensatory model is that the disjunctive model 'considers the sheer presence or absence of attributes, rather than the degree or amount in which these attributes are present ... and in the compensatory model, the attributes traded off need not serve the same purpose while in the disjunctive model they tend to' (Sheth, 2007, p.295).

In the lexicographic model, attributes of different choices are ordered in rankings in terms of importance according to the criteria. Purchasers choose the one choice with the largest

number of attributes meeting the most important criteria. The second- and third- or even fourth-most important criteria will be considered if more than one choice has the same number of attributes meeting the top few most important criteria. A developer may make decisions on project choice based on this lexicographic model by setting criteria such as the right location, no insurmountable planning constraints, not controversial to the public and appropriate lease conditions. He would rank the importance of these criteria. If location is considered the most important, he will make decisions on projects with the most attributes meeting this criterion. This is a simpler method of making choices.

The elimination by aspects (EBA) model is similar to the lexicographic model and was proposed by a psychologist called Tversky (Kahneman, 1979). The purchaser sets a threshold and then rates the choice attributes in terms of importance for each criteria. He will take out those not meeting the threshold in the criteria. If more than one choice meets the criteria, he goes on to rate the choice attributes according to the second and third criteria. Taking the same criteria as the previous paragraph, some developers may set importance on these criteria and rate the projects according to them. The final choice will be decided using the elimination process.

If developers adopts one or more of these methods, it is hard to tell which method best reflect developers' decision-making or may not use any of these methods. Some may use one method rather than the other. They may even use different methods at different times. It is therefore difficult to tell different developers' views on which method is most relevant to different contexts. However, developers will adopt whichever they think fit. This brings in what this research will discuss, i.e. the behavioural aspects of decision-making.

The following will first discuss the comparison of the compensatory and non-compensatory models. Compensatory models, as we have commented above, are in fact processing by brands. They are more holistic in that they consider all the attributes of one choice against another. However, it may be burdensome to execute as respondents have to weigh all the attributes of all the brands. It is suggested that 'low-ticket items ... be chosen with the help of non-compensatory models' (Sheth, 2007, p. 297).

Processing by attributes as in the non-compensatory models will suffer from ‘direction-of-comparison’ effect. The criteria set out for comparison may be based on one brand and thus favours this focal brand, which may have unique attributes non-existent in others. Alternatively, if the focal brand possesses a negative attribute, this may lead to its losing favour as compared to the reference brand.

The lexicographic model is simpler to execute than the EBA but in employing the former, the purchaser would not have the chance to make a choice that may be better on the other set of attributes. Likewise for other non-compensatory models, ‘the deficiency on one attribute is not allowed to be made up for by excess on another’ (Sheth, 2008, p. 297). A choice eliminated in the first criteria may be superior in other criteria but will not be considered. Such sub-optimal choices are eliminated once and for all which may not be beneficial to the purchaser. For instance, the planning aspect may be the most important criteria in developers’ project choice at a time when the Government tightens planning control. However, other attributes such as public support of the project may be played down. If public protest is strong, the project choice model may underestimate by eliminating those choices strong on public engagement but focused mainly on the assumed most important attribute of planning constraints. The attributes cannot compensate for one another.

With the holistic considerations available to the compensatory model, it will be used for extended decision-making whilst the non-compensatory model will be employed for limited and routine decision-making. The latter will also be employed in the initial stage of an extended decision-making process, i.e. a two-stage process, which is called a phased decision strategy. The limited number of choices in the second stage will alleviate the burden on the decision-maker and therefore not lead to information overload and fatigue in choices. Rapid heuristics will usually be employed for ‘repeat purchase of low-risk, low-ticket items’ (Sheth, 2008, p. 297). Since the research is examining the developers’ unique decision-making on project choice, which may be subjective but not merely heuristic, some of these methods or processes may not be suitable.

It is worth noting that whichever model is used, decision-makers will not and cannot make an exhaustive list of all the choices and can only make sub-optimal choices. Non-compensatory models eliminate the choices not meeting the threshold from further consideration. This is a kind of ‘Satisficing ... [as coined by Nobel Prize winning

psychologist Herbert Simon] ... [which] refers to decision-maker's acceptance of an alternative that he or she finds satisfying, rather than pursuing the arduous search for the most optimal alternative there might be Satisficing is common even in the business context ... (as the) cost of searching for information for a myriad of alternatives and then evaluating them is enormous' (Sheth, 2007, p. 298). Satisficing can occur in normal market conditions as mentioned. It can also occur in unusual market conditions. For instance, developers may be satisficing when the market condition is very poor and they are merely keeping staff rather than sacking them to avoid the need to reconstruct the team later. In so doing, they may be willing to take up projects not on the basis of the profit maximisation objective but rather may bid the lowest price based on the satisficing principle. Nonetheless, they may also be satisficing when trying to monopolise a certain sub-market. Another satisficing behaviour appears when developers are 'operating cautious land procurement policies, but [are] increasingly deprived of development opportunities throughout the most recent cycle, ultimately resorting, out of necessity to maintain turnover, to competitive bidding' (Gillen and Fisher, 2002, p.44). Such competitive bidding is not based on rational profit maximisation but satisficing for survival.

Conjoint analysis is a kind of compensatory model in that the respondent will consider all the major attributes of a concept, trade-off the favourable from the unfavourable attributes and thereby arrive at the decision of which project to take up. The rationale for choosing conjoint analysis is that compensatory models are more holistic in considering all the attributes of one choice against that of another. It is best deployed for extended decision-making as we have discussed above. The only drawback is the burden on the respondents to evaluate all the attributes of all the choices.

Common applications of this include the analysis of consumer behaviour when products under consideration are relatively complex such that a number of product attributes are "considered jointly". The technique can be applied to other decision-making behaviour of developers because the consumer good analogy is, in fact, the existence of competing sites or development opportunities, from which the developer must make a selection. These development opportunities, like some consumer goods, are also highly complex and comprise a number of different attributes involving physical, economic, financial, planning and profit aspects. One of the strengths of this approach is that respondents are not asked to explain their choices, but their rationale can be inferred from their choice-making behaviour. The objective is to attempt to explain these decisions in relation to the attributes

(physical, economic, financial, etc.) present in the alternative development options. Arguably, this technique also reduces the possibility of bias. For instance, if developers spend an inordinate amount of time negotiating planning permission, this could introduce a tendency for developers to exaggerate the importance of this aspect relative to, say, economic factors if a direct questioning approach were used.

Advantages of CBC include the ability to collect and predict choice behaviour. It forces trade-offs to be made, helping to prioritise the decision-making factors as well as the ability to undertake simulation for hypothetical scenarios thereby allowing preference shares to be made facilitating those who use CBC, be they developers or Government, in making decisions and devising future policy direction, especially for Government in the latter case. Another benefit of conjoint analysis is that fewer respondents are needed for data collection and analysis based on logit regression. CBC is good at pricing studies but requires precise pricing information. It also deals well with subtle interactions.

Aggregate models, however, suffer from IIA (independence from irrelevant alternatives or what is called the red-bus/blue bus problem⁴¹) and ignore the different preference of subgroups. Comparing very similar concepts can absorb too much net share. CBC also fails when there are differential cross-effects between brands.

CBC closely mimics real-life decision-making but they are simulated choices and not real purchase actions and thus may not reflect real purchasing decisions. Besides, the developed models are static and cannot reflect the always changing market share depending on the different external stimulus or impacts on the attribute levels.

Choice tasks should ask for immediate and concrete decisions rather than abstract rating or ranking. They ask respondents what would they choose now given several choices. CBC therefore leads to simplification in choice. Important attributes will be more emphasised in the choice task, and less important factors receive less emphasis. Sawtooth CBC Technical

⁴¹ Red bus/blue bus example refers to failure of decisions to take account of 'perfect substitutes'. Suppose consumers choose between red bus and cars with equal probability of 0.5. They are assumed to be indifferent between bus colours. Suppose besides red bus, a third mode blue bus enter the arena. The probability of choosing car should be 0.5 whilst the split between red and blue bus should each be 0.25. But IIA i.e. red bus/blue bus analogy suggest that this is not the case. The new probabilities would be 0.33 each for car, red and blue buses.

Papers also suggest that CBC ‘respondents would simplify choice tasks and base their decisions on a few or combination of a few important attributes.

Choice-based conjoint analysis may provide too much information even to the point of overloading as respondents choose between packages each with a list of attributes. It is inefficient to an extent relative to other conjoint methods. Besides, it is difficult to tell the intensity of preference. CBC analyses aggregate respondents’ results which requires almost homogeneous respondents background to facilitate analysis. CBC is therefore not completely accurate.

6.12.3 Previous usage of Conjoint Analysis

Conjoint analysis was previously employed in studies with wide research interests. They can be in the macro aspect, e.g. medication policy, social participation in prioritising waiting lists of patients, telecommunications trends, the valuation of the aesthetics and uses of urban sites, and the incentives for private residential brownfield development. They can also be studies in micro aspect, e.g. the architectural merits of buildings, optimal lighting of indoor environments, provision of library services, preferences, quality and choice in new-build housing. The most relevant of these studies to the development industry and land use are summarised below.

(A) Residential Brownfield Developments

The previous research undertaken which is closest in its characteristics to this research is that undertaken by Wernstedt et al (2006) on ‘Incentives for Private Residential Brownfield Developments in US Urban Areas’. The study examines the effectiveness of the incentives provided by public agencies in the US to encourage private investment in re-using contaminated sites.

In this study, conjoint choice analysis was undertaken through a nationwide mail survey to investigate the relative effectiveness of public incentives in promoting residential use of contaminated property. Conjoint analysis was chosen as the method as problems were encountered with other methods, including that details of investment finance are proprietary information and are therefore not publicly available. Respondents might answer strategically if asked about their attitudes towards the importance of the incentives

in order to affect public policy in terms of wanting more incentives and directing the policy towards that most favourable to them. Most often, respondents would just indicate that everything was important.

Conjoint analysis forced responses on the mutually exclusive choices that were drawn up. A hypothetical residential redevelopment scenario was drawn up and summarised in the following:

1. The respondent is deciding to make a contract offer on a property
2. It is a townhouse project that the company will lease to individual households
3. Market conditions: the area has high potential for property value appreciation that might raise returns above expected values
4. Environmental assessment cost is expected to be US\$100,000
5. Site remediation cost is expected to be US\$900,000 including protection against any cost overruns
6. Land cost is expected to be US\$6 million
7. Development cost is expected to be US\$18 million
8. Revenues are expected to be US\$30 million (present value)

The incentives are summarised below:

1. \$0 or \$100,000 of public sector reimbursement for the full cost of preparation of environmental investigations;
2. Either require or not require separate public hearing on company's environmental response plan prior to any regulatory decision on it;
3. State approval of completed environmental response protecting the company and successive owners from additional cleanup costs either is or is not available;
4. State approval of completed environmental response protecting the company and successive owners from liability for any environmental damage claims either is or is not available;
5. When response plan activities or construction begins, a public subsidy will be provided in the amount of \$0, \$125,000, \$250,000 or \$500,000.

Conditional logit was used as the statistical model for estimating the probability of the relative importance of the incentives.

Of the 2500 members of the Urban Land Institute who received the questionnaire, 313 responded (12.5% response rate) and this resulted in 1565 choice experiments (313 respondents x 5 choices/respondent). All the respondents worked for or owned a real estate development company. The results suggest the following importance of the incentives (in order of importance):

- protection from third party liability
- protection from cleanup liability
- relief from public hearing requirements

This indicated that planners could help promote infill development on contaminated sites in a socially and environmentally appropriate manner.

Summary Statistics (Wernstedt et al (2006), Table 3 on p. 111)

Variable	% sample	Notes
	(n=313)	
Real Estate Developer	89	All other respondents are construction or consultants
Residential Background	79	Respondent experienced w/ residential projects
Infill experience	92	Respondent experienced w/ infill project
Contamination experience	78	>0 projects w/ contamination
Assessment experience	90	>0 projects w/ environmental assessment done
Brownfield specialist	19	>60% of projects have been at contaminated sites
Cleanup experience	76	>0 projects w/ cleanup done
Abandoned project	32	>0 projects abandoned due to cleanup cost
Environmental subsidy	23	>0 projects w/ public assessment/cleanup \$
Construction subsidy	33	>0 projects w/ public construction \$
Makes decision	90	Respondent partly makes investment decision
Neither choice	31	Respondent chooses neither incentive bundle

(B) Demand for IP telephony

Another conjoint analysis is by Ida et al. (2008) on ‘Conjoint analysis of demand for IP telephony: the case of Japan’. The study investigated the demand for IP telephony which is even at the time of the research still in its infancy. The aim was also to provide for policy discussions on telecommunications.

CBC was a stated preference method chosen because it is the preferable revealed preference method justified by insufficient availability of actual market data. The major attributes included the basic monthly charge, the voice quality, number portability,

emergency access, fax usage and call charges. A conditional logit model was again used for estimation of the results.

A stratified sampling method on pooled data of a total of 400 respondents each answering 10 questions resulting in 4,000 (400 x 10) samples being collected.

The results indicated that IP telephony was still being ‘considered an add-on service option in Japan rather than a close substitute of the existing plain old telephony service (POTS)’. There is little evidence that many households would promptly forsake fixed line service for IP telephony. The determinant for wider usage of IP telephony is a guarantee of quality of service, including voice quality, number portability, fax usage and emergency access as compared to the currently used POTS.

(C) Prioritising Patients on Waiting Lists

In their article “Wide Social Participation in Prioritising Patients on Waiting Lists for Joint Replacement: A Conjoint Analysis”, Sampietro-Colom et al (2008) used conjoint analysis to develop a priority scoring system for patients on waiting lists for joint replacement. This is drawn up according to the views of different groups, including consultants, allied health professionals, patients and their relatives, and the general population of Catalonia and with a view to achieving wide participation in drawing up the scoring system. Focus groups each comprising 5 to 10 individuals were called in to identify the priority criteria which amounted to 15 different criteria. A rank-ordered logit model based on fractional factorial technique was built up for scoring estimations. The results for the 560 respondents being that both clinical and social criteria were selected in the following relative importance (over 100 points):

1. pain (33)
2. difficulty in doing activities of daily living (21)
3. disease severity (18)
4. limitations on ability to work (10)
5. having someone to look after the patient (9)
6. being a caregiver (6)
7. probability of recovery (4)

(D) Prescription benefit plans

Wellman and Vidican (2008) conducted a mail-based survey with 1,500 respondents using choice-based conjoint analysis (CBC) on “A pilot study of an HB method for utility estimation in a CBC of prescription benefit plans including medication therapy management services (MTMS)”. Respondents chose a single-stated choice amongst a selection of different prescription benefit plans. A series of choice tasks based on the following attributes was developed:

1. co-payment
2. pharmacy access
3. formulary, level of pharmacist interaction including MTMSs
4. monthly premium

Logit-based and HB estimation for utilities were employed and preference share market simulation were tested. Through random sampling, 1,500 respondents were each presented with 4 panels each with 4 versions resulting in 16 panels to achieve attribute level design efficiencies between 85% and 95%. The results confirmed that the CBC with HB analysis provides utilities similar to those estimated using aggregated logit-based methods. Additional benefits included provision of individual respondent part-worth scores for each attribute level. Some improvements could be made on the instrument design and more tasks per respondent.

(E) Development of new library services

Hermelbracht, (2006) “ProSeBiCA: development of new library services by means of conjoint analysis” adapted the conjoint analysis to develop future library services. ProSeBiCA is an acronym of the German project ‘Prospective control of the services of academic libraries by means of conjoint analysis’. ACA and in the second stage coupled with CBC were used. The writer recognised the need for libraries in academic institutions actively to design and offer services that fit users’ needs and preferences. Secondary data sources such as academic journals, articles and political papers forming the ideas and opinions of 1,349 academic library users in four German universities were collected in an empirical survey. Added to that were five brainstorming workshops. These together generated more than 250 concrete new ideas for services. 42 attributes and 118 levels were

drawn up for the ACA. For the CBC, 6 attributes each with two or three levels are outlined below:

1. innovation strategy
2. level of support
3. degree of digitisation
4. degree of specialisation
5. add-on services with costs
6. presentation of services

Almost 5,000 responses were gathered during the three empirical surveys (ACA for Bielefeld University, followed by CBC in the same University, and then a combined ACA and CBC for the University of Cottbus) in two universities.

The ACA result revealed that many current services were evaluated favourably whilst improvements to current services were regarded as providing a high utility. There was a demand for many innovative ideas but the conventional interior design and a lack of online-publishing possibilities were considered less desirable. There was also little demand for some new service ideas.

As for the CBC results, the users were in favour of a selective innovation strategy, assisted working and specialisation in selected areas. Respondents preferred the pragmatic and functional to the entertaining and stimulating presentation of services. They were also willing to pay for some additional services so long as these do not take precedence.

The findings concluded that conjoint analysis helped identify users' preferences for concrete services and allowed simulation on future trends for library services.

(F) Architectural Preferences of Architects and the Public

Fawcett, et al's article on the Environment and Behaviour: 'Reconciling the Architectural Preferences of Architects and the Public: The Ordered Preference Model' (2008) deployed paired comparison conjoint analysis, i.e. ACA with the help of 56 photos in 28 pairs to order the visual preferences of architects and the public for suburban office buildings. However, no overall sample data were provided. The idea was to understand how far

developments designed by architects would be liked by users and were of a high-quality design.

The results showed a different weighting of design attributes for the two groups but a design type was identified that would combine the preferences of the two.

The attributes include the following:

- Roof Shape: pitched or flat
- Wall Material: Traditional brick or non traditional metal/panels
- Architectural Character: weak or strong.

The results indicated that users had a higher within-group average difference score than architects, i.e. more diversity in preferences within the user group. The architects' 'ranking had a greater separation between scores, indicating that the group had better-formed preferences between the design types'. A narrower spread was derived from users' ranking.

The rankings of design types by architects and users are different in that the two design types ranked highest by architects received lower scores from users whilst that ranked highest by users received negative scores from architects. Architects ranked highest those four design types with strong architectural character, but for the users it was the four types with a pitched roof that were ranked highest.

(G) Preference for a daylight residential indoor environment

Cheung and Chung (2008) conducted an on-line survey uploaded onto a website regarding 'A study on subjective preference to daylight residential indoor environment using conjoint analysis'. Seven attributes each with two levels on daylight performance assessment were selected. Sixty respondents, including 42 male and 18 female, participated.

Fractional factorial design was used to generate eight profiles of attributes with different levels for respondents to rank-order them. The relative importance of the seven attributes on overall daylight performance was estimated. The results ordered the importance of the attributes as follows:

1. quality of view
2. general brightness

3. impact on energy
4. user-friendliness of shading control
5. perceived glare
6. desktop brightness
7. sunlight penetration

(H) Preferences, quality and choice in new-build housing

Leishman et al (2004) used CBC to understand preferences, quality and choice in new building housing beyond the ‘big picture’ factors such as the number of bedrooms, location and size of the property.

The study provide a detailed examination of:

1. the new-build housing buyers’ housing needs and preferences including attributes such as development density, intensity and estate design,
2. an analysis of the physical, locational and quality characteristics of housing actually constructed by house builders
3. the relative importance of the factors identified in (2) above in the housing choice process.

After a review of literature and studies on housing preference, qualitative methods such as 6 focus groups, 14 interviews and the quantitative method of conjoint analysis (CBC) for 400 new-build house and flat buyers were undertaken in Glasgow and Edinburgh with evidence from new house buyers.

For the CBC, respondents were presented with 18 to 19 showcards with pairs of choice tasks of possible houses varying by price, type, location, neighbourhood, property type, bedroom layout, public room layout and external space, i.e. front and back gardens. They traded-off one in each pair to derive the choice they preferred.

The conclusion suggested that ‘house-building outcomes are very different from new-build house buyers’ needs and preferences’ with the most noticeable example being the need for a larger number of bedrooms for investment purposes and the dislike of smaller bedrooms. Location and neighbourhood factors were important except to a group that responded to

property type preferring flats and design/layout features. Non-bedroom layout features were very important but depended on the demographic and other features of the family. Builders' construction standards and customer care were generally poor, and complaints were particularly pronounced at the lower end of the market. Policy directions were provided by the researchers to avert these problems.

6.12.4 Ethical Considerations

Ethics in social research should not be ignored as 'they relate directly to the integrity of a piece of research and of the disciplines that are involved' (Bryman, 2008, p. 113). Of particular interest are those ethical issues that emerge from the relationship between the researchers and the respondents during the investigation.

Diener and Crandall (1978) break down ethical principles into four main areas:

1. whether there is harm to participants;
2. whether there is a lack of informed consent;
3. whether there is an invasion of privacy;
4. whether deception is involved.

(Bryman, 2008, p. 118)

Harm to participants includes physical, emotional and developmental harm, such as that related to the respondents' self-esteem, any stress on their part, as well as harm to participants' development.

In this research, the researcher anticipated and guarded against such consequences to respondents and their relationship with their environment. Particular care was given to maintaining the confidentiality of the records. Data and information collected from respondents and respondents' details have been separately stored in USB drives and locked in a cabinet in a safe place. No access to the materials in the cabinet has been provided to anyone but the researcher. Reporting of the research is done in such a way as to ensure that no identification of the participants can be made.

There was adequate and informed consent from the respondents. The respondents were told that their identity will not be made known and that the researcher will make the utmost

effort to preserve confidentiality. Informed consent forms provided by the University were completed. Though respondents were not asked to sign the forms, they were told that their participation was voluntary and that they were free to refuse to answer any question. They could withdraw from the interview at any time and withdraw their data before finalisation of the thesis and that they will be informed of this deadline if required. One of the respondents refused to continue the conjoint analysis questions after having answered two concepts. He was kindly invited to continue but the researcher did not press him after the respondent confirmed that he would not be swayed from his decision. Another respondent requested that the information contained in the thesis that quotes his views, should be provided to him for preview before submission. This has been done as requested.

No invasion of privacy is condoned or conducted, and transparent and open discussion was made with the respondents to eliminate any possible deception. The conjoint analysis interviews were based on a hypothetical combination of scenarios. The conjoint analysis questionnaire therefore did not involve seeking private information. For the focus group, the respondents were informed that the researcher would do her utmost to preserve the confidentiality and anonymity of the data and information provided. No guarantee could be made as there may be involuntary leakage, such as theft. As at the date of submission of the thesis, no invasion of privacy has occurred to the knowledge of the researcher.

It is also worth mentioning that the research has met the ethical requirements of the Department of Urban Studies of the University Glasgow and those of the University of Glasgow's Ethics Committee and that there have not been any ethical issues considered worthy of investigation.

Chapter 7: Findings from the Focus Group and Interviews prior to the Conjoint Analysis

7.1 Introduction

As discussed in Chapter 6, a focus group with three managers and four interviews with different professionals/managers were conducted. This chapter will set out the findings of the focus group and the several interviews with respect to the research questions, in particular to understand (a) fresh insight related to the Hong Kong context and (b) issues widely known.

For (a), fresh insight and those issues particularly related to Hong Kong, the following will be discussed:

(1) Development Process and Government Intervention

(a) Planning & Public Participation

The recent amendment to the Town Planning Ordinance which gives more participation power to the public will be discussed. The change in the rules of the game due to the wider public participation and the developers' responses will be examined and analysed.

(b) Land Acquisition and the Importance of a Land Bank

Land costs are particularly high in Hong Kong. The difficulty in acquiring land from the market, and the preference for auction or gradual acquisition through the market by different developers will be discussed. A more detailed discussion will be provided on the importance of a land bank to developers in Hong Kong. Specifically, attention will focus on whether the possession of a portfolio or land bank helps developers obtain a competitive edge?

(c) Effectiveness of the Urban Renewal Authority's Actions

The effectiveness of the Urban Renewal Authority (URA), and its actions will be discussed in this section.

(2) Perception of Risk, Risk Pricing, Profits and Uncertainty

(a) Risk and Pricing

A brief discussion will be held on the difference between risk-loving and risk-averse developers to allow an understanding of insiders' views of the actions of their counterparts. Risk pricing strategies of Hong Kong developers will also be discussed.

(b) Profits and Uncertainty

Profits and the uncertainty in obtaining profits are issues widely known as important to redevelopment decisions. The focus here will be on those related to the Hong Kong context.

(3) Practitioners' views on the disparity in undertaking development between Hong Kong and China

The difference in the risks involved in engaging in redevelopment in Hong Kong and China and practitioners' views of the profitability and worthiness of doing business in the two adjoining territories will be examined.

For (b) issues widely known, a general overview of the general factors as set out in textbooks and academic journals is provided: economic and market conditions, profits, Government approvals, land assembly, stakeholders relationships, public engagement, profits and uncertainty of obtaining profits.

Particular reference will be made to:

- macroeconomic conditions
- market conditions
- profits

7.2 Fresh Insight related to Hong Kong

7.2.1 Development Process and Government Intervention

(a) Planning & Public Participation

Talking about the prominent administrative risks, most interviewees cited the risks from the recent change in planning policies. The Town Planning Ordinance in Hong Kong was amended in 2005 to confer wider public participation in plan-making and development control⁴². Besides, the recent imposition of development restrictions in Outline Zoning Plans might result in ‘down zoning’, resulting in lower development intensity, including plot ratio and building height. These posed serious risks to developers.

One might think Government was very facilitating to the public. Some interviewees commented otherwise. An interviewee said that Government was still powerful and executive-led. Although it would consult, if it did not like what it heard, it would block its ears. An example was the Kai Tak Development where the Government proposed a stadium and a cruise terminal, which the public did not want. The Government ignored the public comments, despite consultation.

The Government embraced public participation reluctantly because it had no choice. People called for democracy and the public at large was better educated. The Government and the public were still in the learning stage during the early days of the democratic and participation process. Hong Kong was still searching for a suitable mechanism to handle and decide on public comments, on a model of its own. Hong Kong was yet to learn that the majority rules after proper consultation is done, even if it meant a majority by a small margin. The reason for the failure to do so was because most top Government officials making decisions were not elected. There was no legitimacy in their decisions.

On whether the recent extension of public participation would increase risk, most interviewees replied in the positive. However, their comments were very diverse.

⁴² Public participation has long been provided in plan-making. The recent amendments invite representations in the form of supporting, objecting and commenting on the plan; as well as comments on the representations. For all planning applications to the Town Planning Board, which is the authority responsible for making decisions on town planning in Hong Kong, public comments will be sought and will form one of the material considerations in planning applications being approved or rejected.

Comments of those in favour of public participation could be summarised as follows.

Some interviewees said there had been changing public expectations. In the past, the Government was the decision-maker. Nowadays, people asked for public accountability and public participation rather than following blindly what technocrats in the Government proposed. The Government therefore responded to this expectation and increased public participation in relation to its policies and decisions. It was good that the Government was listening to the people's voice but the public lacked professional knowledge and therefore might have unrealistic expectations.

They explained the reason for the change in public attitude was because of greater public awareness, better education standards, less willingness by the public to accept the Government's views, deteriorating environmental conditions and a rising demand for better living conditions.

They further commented that some developers were in favour of lowering development intensity for a better living environment. One interviewee said the Chief Executive of Hong Kong was prepared to review plans to offset wall-effects⁴³, even accepting a reduction in public revenue through lower premiums (Policy Address in October 2007). The Government was on the right track to provide a good living environment by lowering the height of buildings and increasing the distance between blocks. This interviewee cautioned that planners should pay due attention. Hong Kong was ranked 156th in terms of quality of life though Hong Kong's economic competitiveness is in the top five in the world in 2008. It was a disgrace. There was a price to pay for a better living environment. Society should be prepared to make the choice. Less development would mean less premiums and a reduction in the amount going to the Government's coffers, but this would improve living conditions.

When incorporating development parameters into statutory Outline Zoning Plans, the Government should consult the public properly and possess the will power to make firm decisions that would not be changing repeatedly. All that developers needed was certainty.

⁴³ Wall effects refer to the implication on the built environment and those living in neighbouring buildings as a result of the construction of buildings spread out as a wall in an elongated manner with little space in between them. This will block the air ventilation, penetration of sunshine and sometimes resulted in dwarfing effect on the neighbouring buildings.

An example cited by this interviewee concerned the construction of a road bypass proposed in Wanchai. The Government's planning was changing all the time. Usually, it took a long time-frame to turn a planned project into actual construction. If the plans were constantly changing and the authority was reviewing decisions made in the past, no development would materialise.

According to this interviewee, public participation in planning for new development areas, such as Kai Tak, which was all Government land would not result in much risk. However, for a built-up area, wider public participation would increase risk. In the past, the Hong Kong Government's role was to make the best use of land, to maximise the returns on each plot of land for the Government. This was not suitable nowadays as people were asking for a better quality of life and a wider participation process rather than just economic efficiency.

Those against public participation cited the following reasons.

Some interviewees said that the Government did not know how to settle public comments or disputes. The Government did not follow the principle of 'majority rules'. It also accepted demands from the minorities. The Government did not know how to make logical decisions, was too soft on public comments, even leaning towards the public against developers. Public comments were now invited for planning applications. Many comments received were related to individual interests and might not reflect the benefit to the whole community. For instance, most individuals objected to a new development blocking the views from their apartments. Although higher buildings might block the views of some residences, they would result in smaller footprint and improve the general environment of the area. It was a planning gain to society. If strong public objection was envisaged, developers knew that the scheme might not be approved. In order not to delay the development process, some conservative developers curtailed their involvement in Hong Kong property redevelopment due to the risks of dealing with the Government.

Public Engagement

They added that there was a surge in objections against developers' development schemes by green groups and the public through the statutory planning process. Besides, the down-zoning of some sites in OZPs also created much uncertainty for developers.

Some explained that the Government's decision to restrict building height and other development parameters in Outline Zoning Plans was in fact the result of recent public discontent on the creation of wall-type buildings in many prominent urban areas that have blocked views and air ventilation for existing residential areas adjoining these developers' schemes. Such changes in the plans create risks to developers with large land banks.

Interviewees were of the view that the Government should determine and be firm on development intensities such as plot ratio and building height in addressing public concerns.

Several interviewees said that the Government could also help by defining what constituted wall-type buildings and stating its stance on this issue⁴⁴. Planning control stipulating development restrictions required that a certain plot ratio and building height be achieved/controlled. Therefore, buildings were bound to be fat and check-box like. The Government should decide whether to allow design merits and relax controls, which would help improve ventilation.

The following sets out the interviewees' views on the way forward for the Government:

Some interviewees commented that the TPB was still looking for a general consensus from public even when community demands were clear. It was not certain how the TPB made decisions and it was important that the TPB made fair, equitable and consistent decisions. Interviewees expected clear and firm planning guidelines from the Government about the development parameters of a particular site and how to make decisions on public comments.

⁴⁴ For instance, how much distance between buildings and how tall the building will be allowed. Was the concern about wind, or about blocking people's views? Were all those built in one row considered wall-type? In fact, whether or not they constituted wall buildings depended on the land use or building patterns in the area and the direction of the wind. It should provide guidelines on how to avoid such developments.

According to the interviewees, developments generally took 3-5 years. Development parameters should not be challenged by hindsight. The rule of law should be upheld and development restrictions on the statutory plans should not be unduly amended and developers' interests should not be adversely affected without respecting development rights. Maintaining development rights would increase certainty and assist in lowering risk. Developers had followed due statutory processes. The Government should create a level playing field and uphold the rule of law.

In court, arguments would be discussed then discarded one by one if they were irrelevant. Only the relevant considerations were further considered and explanations would be given. The TPB should conduct its deliberation process in the same way. How could consensus be reached on a decision by members in a meeting? When making decisions, there was no guidelines for the manner TPB members could make a decision, such as whether a vote would be cast to ensure that the decision depends on majority votes.

7.2.2 Land Acquisition and the Importance of Land Banks

Land costs are particularly high in Hong Kong. This section will discuss the interviewees' views on the difficulty in acquiring land from the market, and the preference for auction as opposed to acquisition gradually through the market. A more detailed discussion will be provided on speculative behaviour and the importance of a land bank to developers in Hong Kong. The section will end by discussing how the possession of a portfolio or a land bank helps the developers obtain a competitive edge.

An interviewee advised that land/property costs were the main costs in property development in Hong Kong and determined development profits as that amounted to 70 to 80% of total development costs. Such sizeable upfront costs meant that developers were very exposed to risk once they had bought the land.

As explained in Chapter 2, land acquisition in Hong Kong may be conducted by developers assembling land in the property market either gradually or as a one-off purchase, through intermediaries or third parties. Developers hold these tracts of land and properties in their land bank.

Developers may also acquire land through auction and tender from the Government. For land auctions, one interviewee said that the preference for auction might be due to the corporate culture of the developer firm and the procedures were straightforward. A clean site would be obtained, which would be unlikely to involve legal proceedings. The risks of the planning and lease aspects were lower as these were cleared before the Government put up the land for auction. However, there was fierce competition between developers at auctions.

Redevelopment, on the other hand, might entail the need to clear unreasonable planning controls. Sometimes, developers who could not acquire the whole property would need to acquire remaining lots under the Land (Compulsory Sale for Redevelopment) Ordinance after obtaining 80% or 90% of the titles. However, legal proceedings for obtaining the remaining lots would still be necessary.

The second factor identified by interviewees was the ability of the developers. The ability to make quick decisions in particular was very important and thus the family-controlled developer firms with less decision-makers did better. Auctions involved fierce competition amongst developers, and required them to make instant, almost instinctive responses. Just as in negotiation, one was bound to be affected by the response from the other party or even third party competitors.

Another interviewee, however, said that developers were very well disciplined. They set the threshold above which they would not bid for a piece of land. They would conduct as accurate and comprehensive an appraisal as possible beforehand and would not be easily swayed by intuition in the marketplace. They made very measured, not intuitive decisions.

This concurred with the previous discussion in Chapters 3 and 4 that behavioural aspect of developers' decision-making determined their risk profile.

Acquisition in the market

The procedures for redevelopment, which entailed property acquisition in the market, were more complex and involved uncertainty on the development restrictions set under statutory plans. If there were disputes about the controls set by the Government, be it on planning or building aspects, seeking a decision of the court might be necessary.

Interviewees considered that the land assembly process for redevelopment in Hong Kong worked very well. It was a known process and developers knew the rules of the game. Information was given by the vendor and everyone knew clearly the requirements of the Government. Nothing was hidden from them.

To facilitate redevelopment, it might be necessary to lower transaction costs. In Hong Kong, the Land Registry provided the required property information. Transaction costs were therefore not excessively high. However, land assembly or property acquisition was an area where there were high transaction costs because of missing titles and the unrealistic financial expectations of some owners.

The Government should also provide clearer guidelines on how they arrived at the development parameters in the statutory Outline Zoning Plans. When buying existing properties, developers needed to pay not only the market price for the properties themselves, but the price of a potentially more intensive development once planning permission would be given. Property owners in Hong Kong were asking for exorbitant prices from developers who assembled properties for redevelopment. Nonetheless, planning permission for the more intensive development parameters might not be obtained. This exacerbated the risks. Land overhead costs were high and therefore affected some small developers' ability to participate in redevelopment but big developers were not affected so much.

Interviewees considered that a balance between protecting private property rights and reducing transaction costs would be needed. Developers sometimes needed statutory powers to assist in redevelopment even though the Land (Compulsory Sale for Redevelopment) Ordinance allowed resumption of the remaining titles if 80% to 90% of the owners agreed to sell to a developer. However, there would still be a need for the court to make a final decision. The process was too time-consuming and uncertain for some developers. The Hong Kong Institute of Surveyors recorded that only four cases were granted an order for sale since this Ordinance was enacted⁴⁵. A new legislation was passed to lower further the ratio of land titles that should be acquired before a project was eligible

⁴⁵ In a letter from the President of the Hong Kong Institute of Surveyors to the then Secretary for Planning and Lands, dated 16.8.2005.

for instigating resumption from 90% to 80% if certain requirements were met, e.g. the building is fifty years old or older.

Speculative Behaviour and Land Banks

Some developers reported that they have gathered their land bank at a low cost gradually over a long period of time. Developers seek approvals on planning application and building plans as early as possible in order to be considered as commencing the development⁴⁶. The negotiation of premium and actual construction would be delayed till a market downturn so as to negotiate a better price for the premium with the Government. These projects are reserved in the developers' land bank.

An interviewee said that in mid-levels⁴⁷, a 12-storey building with 24 flats could be acquired at the market price in the secondhand market. Since the market price for brand new buildings with all the facilities was so much higher, about double, the price of secondhand flats, developers after paying for these 24 flats at market price could still realise a lucrative profit. However, the demand and resultant market price for aging apartments in less attractive areas would be lower. As such, location was very important.

7.2.3 Effectiveness of the URA Actions

It is worthwhile understanding market failure in redevelopment in Hong Kong.

Market Failure

It has been said that market failure arises in some urban areas. In western countries, redevelopment usually takes place in slums or run-down areas. Stigmatisation plays an important role in lowering market demand and price in redevelopment areas. The market price in regeneration areas tend to be volatile but asking price remains high and unrealistic. Due to the lack of frequent transactions in redevelopment areas, valuers generally employ dated values that were sometimes already historical whilst market demand in redevelopment areas could have in fact lowered substantially. As Syms (1996) pointed out

⁴⁶ Commencement of development – there is a requirement for initiating the project development within four years of planning approvals or the permission will lapse. Building plan approvals and completion of land matters will be considered commencement of development.

⁴⁷ Mid-levels is located in the mid hill of Central, a luxurious residential area.

(as quoted in Adair, 2003), “the valuation profession is blamed for inconsistencies and failure to reflect the risk and uncertainty associated with projects initiated on regeneration land”.

Some interviewees said that there was not much urban blight in Hong Kong as compared to some western cities. Hong Kong was a small place and location was not a big problem. Stigmatisation would not be so severe.

They added that there was property market failure in some districts in Hong Kong and therefore needed planning to facilitate redevelopment. The existing plot ratio of these areas was too high, and thus the additional value or returns from redevelopment would be very limited. Direct Government intervention such as the URA stepping in for social purposes would be important.

According to several interviewees, the most fundamental question was to ensure reasonable returns would be obtained from the redevelopment. This depended on the interplay of three factors: costs, timing, and redevelopment potential. For instance, Yu Man Fong (Square), a URA project in Kwun Tong, might not be profitable in terms of the long time-frame and huge costs due to the large scale of redevelopment. The private sector could not take up the project which proved too daunting for them. The URA therefore stepped in with a Government subsidy and undertook redevelopment for a public purpose.

This part of the interview explored the effectiveness of the URA in tackling redevelopment in Hong Kong. Those who found the URA effective in bringing about redevelopment in Hong Kong gave the following remarks.

Some interviewees said that working with a public sector client greatly reduced the risks associated with a development project. If any project were associated with Government, there would be less obstacles getting planning and development proposals as well as building plans approved.

They added that the URA served a useful function. Most buildings in Hong Kong were in multiple ownership. The URA assembled properties and land, handled public objections, and obtained planning permission and so dealt with most of the risks. The risk to developers who successfully got the bid from the URA after tender would be very limited.

Developers were very happy to accept such URA projects. Developers welcomed it if each URA redevelopment scheme increases in scale because that meant developers got more profit without much increase in risk. There would also be economies of scale.

Those who have reservations about the URA model raised the following main points.

According to the interviewees, the problem with the URA was the high acquisition costs it had to pay under the requirement of the URAO. The Government should not be too involved in the property market, but should only facilitate and leave the rest to the market. For instance, the proposal to reduce the 90% threshold for Land (Compulsory Sale for Redevelopment) Ordinance to 80% for certain categories of aged buildings was a step in the right direction. It was suggested that the URA focused on tackling those projects the private sector could not afford. The public should accept that the URA's schemes should be for a public purpose for the enhancement of the environment, rather than a search for profits. The URA's mandate to operate according to prudent commercial principles should be changed.

Some interviewees commented that redevelopment by developers was much more straightforward than the URA schemes. Developers would assemble land and go ahead with development if the schemes were financially viable and provided reasonable returns. Most of the redevelopment in HK had been done by developers. The impact of the URA was very limited, their development process too prolonged and they had not done many projects because there were many statutory and administrative requirements, especially the need for public accountability under the URAO. There was not much flexibility. The URA also tendered out projects but they were not as effective as developers in undertaking their redevelopment schemes.

The interviewees further commented that the URA/Land Development Corporation (LDC) had been very important in 1990s. In the past, Government's resources for redevelopment were very limited. Partnering with the then LDC or the URA currently, developers would be indirectly given Government resources in that the LDC/URA acquired properties consisting of dilapidated building blocks on behalf of developers. Now that the Land (Compulsory Sale for Redevelopment) Ordinance was in place, developers could easily buy properties in the market and asked the Government to resume the rest if 80% to 90% of the properties had been bought by the same developer.

Some of them commented that the URA competed with developers nowadays. Even for unprofitable schemes, the URA could not assume the social responsibility role because of the need to operate under prudent commercial principles. For unprofitable schemes, the URA proposed linked sites⁴⁸. Talking about linked sites, some interviewees said that the URA required that a viable project be linked to a non-viable project even for marginal projects. It was hard to do the matching and therefore it took a long time for a scheme to go ahead. The timeframe was too long under the URA and therefore risks were also too high. It was better for developers to undertake redevelopment themselves.

Acquisition of Properties by the URA

The URA has been using its compulsory purchase powers to buy properties and land in the parts of the urban areas designated for redevelopment purposes through land resumption. The threshold required for instigating resumption is 80%.

Interviewees said that the URA was effective in assembling land, taking out the risks of land/property acquisition for developers. The URA's schemes took a long time to acquire sites and then go through the tender process. The process was too protracted. If a site was designated as a URA redevelopment area, owners' expectations would be higher and therefore individual developers would find it difficult to assemble sites. An illustration was the recent Gage Street project. One of the major property owners in the scheme's area owned a certain amount of land and wanted to acquire the rest and undertake redevelopment. However, after the URA proposed the acquisition price, this landowner/developer found it hard to obtain more properties even though he raised the offer above the URA's because property owners worried that the acquisition process by this majority owner would be longer, noting that the URA had made the compensation offer already.

A general view was that the URA had to pay very high acquisition costs. It would be worthwhile pointing out a comment from one interviewee regarding whether or not the URA's compensation package was too generous. During his first job in an English city, he interviewed an old lady in a designated redevelopment area. She said she was born in the house she was living in and wanted to die there, too. However generous the compensation,

⁴⁸ Linked Sites were proposed to pair up a profitable project with an unprofitable one in the same district with a view to cross-subsidise the latter and make both schemes financially viable to the URA and developers.

it would not entice her to move out. Money could not buy everything. If one were to buy out another person's property, one had to provide generous compensation.

7.2.4 Profits and Uncertainty; Risks and Pricing

(a) Profits and Uncertainty

Profits have always been the ultimate and major goal of the majority of developers.

It is worth noting that in Hong Kong, developers generally make profits from redevelopment by increasing the plot ratio, rebuilding low-rise buildings into high-rise tower blocks to make a profit.

One interviewee said that developers' profits in some projects might be very high, such as up to 50% but only say about 6 projects of the some 60 projects under investigation were profitable, the others might result in a loss. However, costs, at least for professional fees, must be paid for the other 60 projects too. Therefore, if one considered the full operation of a development firm, the returns were reasonable. Many developers recorded deficits when they bought land at the peak of the cycle but sold at a time when the market was at a low point, especially during the aftermath the Asian Financial Crisis in 1998.

Another interviewee said that from a market efficiency point of view, risks and returns were proportional. If developers were earning excessive profits, there would be increasing number of developers and more competition. Hong Kong did not have many developers. From an efficient market point of view, there should be more developers. It was not very difficult to become a developer but businessmen consider other markets more profitable. For instance, Chun Wo, a construction company, focused on construction in Hong Kong but was involved in a lot of property development projects in China and Vietnam. Shui On focused on the China market, maybe because risk and returns were more proportional there.

There were, nonetheless, counter-arguments. Indeed, most literature suggested that the property market was not efficient due to the heterogeneous products that resulted in less than perfect information and few buyers and sellers, which fell far short of what would be expected of a perfect market. As such, there was a view that high set up costs, the less than

perfect information and the less efficient market meant that there were not many developers and there existed barriers to entry for ‘infant developers’.

As one interviewee aptly said, the Hong Kong property development industry comprised mostly large companies and it was very difficult for small start-ups to join the party. The latter lack the resources and the knowledge to enter and compete.

One interviewee cited the uncertainty related to working with quasi-Government agencies such as the URA and its predecessor, the LDC. They were very slow in putting forward schemes. It took 5 to 6 years for the URA to assemble land and then tender. This prolonged process was the result of the restrictions and statutory obligations set out in the URAO. Some of the URA’s schemes might not be financially viable and therefore deterred developers.

Having examined the major factors affecting project choice for redevelopment in Hong Kong, it is worth understanding how developers price risk, i.e. how they measure the risks of redevelopment.

(b) Risk pricing – Methods and Typology of Developers

Factors leading to difference between risk-averse and risk-loving developers

This section will examine the risk pricing of different kinds of developers. This would help explain the heterogeneity of responses to project choice by different developers.

As examined in Chapter 4, there is a typology of developers who differ in their risk perception and acceptance. Some other major factors were identified in the interviews as affecting the risk profiles of companies. They were (a) a land bank (b) the corporate culture, (c) the ability of developers, and (d) the judgment and knowledge of the developer. Interviewees comments were summarised below:

(a) Land Bank

Some interviewees said that big developers were very risk-averse. They could afford to be. They were big companies with good reputations and a big land bank; they were financially sound; whereas the smaller developers/new players needed to take more risks.

They added that these risk-loving developers had no choice. They did not have land banks and had to bid for land at a relatively high price to keep their business going. Therefore they were willing to take more risks. Developers with land bank or many projects in their portfolio could afford to be relatively risk-averse.

(b) Corporate Culture

One interviewee said that many developers in Hong Kong were family businesses. If the founder of the company was very risk-averse, the company would be cautious. The family business successor, most of the time, would inherit his risk-averse attitude. This had become almost the family culture.

The entrepreneurial spirit of the company or owner of the company would be an important corporate cultural factor, too. Some might call this the gambling spirit. Some family-controlled developer firms would be more willing to take risks than those owned publicly by shareholders, because the former could make faster and more risky decisions whilst the latter had to abide by shareholders' views.

(c) The ability of developers and the human factor.

Several interviewees commented that the ability to make quick decisions in particular was very important. An auction, for example was a fierce competition amongst developers. Engaging in it required developers to make instant, almost instinctive responses. They added that the human factor also affected one's ability, even during negotiation or bidding at auction. Bidders/buyers from developers would be swayed by the sellers' offer or the facts presented. Or, a developer could make a mistake. Some successful developers with long good track records also made losses in one or two projects in the course of time.

(d) Judgement and Knowledge

One interviewee said that developers might judge that the risks of some projects were too high though at the same time another developer might consider the same project risk acceptable. Some of them thought the risk of property development relatively low because real estate was a long-term asset that could ride through market cycles and therefore meriting being rated as a secure investment.

This interviewee added that some developers had a different perception of the risk of individual projects. Knowledge and interpretation of the information differentiated the two groups. Whilst some might think a project risks relatively low, some companies might have better knowledge and know the hidden risks. Some companies knew how to reduce risk in certain respects and therefore had better knowledge to reduce risk. For example, construction companies might be in a position to control costs better and could bid at a lower price. Appraisals done by some companies might be different because they interpret some data and information differently and therefore consider a project more or less risky. Some developers had no experience, no knowledge of a particular sector of development such as for agricultural land in the New Territories and so would be risk-averse in this respect.

Risk Pricing Methods in Hong Kong's Practice

Interviewees who represented developers in Hong Kong said that their company would undertake, as part of the interviewee's development appraisal process, sensitivity analysis and scenario testing as basic analysis. However, they would not normally use Monte Carlo Simulation.

They added that depending on corporate culture, some companies did more analysis, others less. It also depended on how much weight the decision makers put on the analysis. These analyses were objective, but decision makers might make subjective decisions based on their own character and view of market performance.

They went on to discuss that the calculation was affected by the performance of the overall economy, not just that of the property market. After the Asian financial turmoil in 1998, many developers experienced losses on individual projects. This was either due to a miscalculation of risks or outliers as a result of a sharp and larger than expected change in the financial market. Risks had been considered but appraisers did not expect such large effects.

A Government official said that HK developers were better organised, even to the point of being engaged in a property cartel with a few big players dominating the property market. They were very good at spreading risk such as by slowing down development and waiting

till market prices rose again, whereas in the UK, there were larger numbers of developers and fierce competition.

Risk Management Measures

Developers would price risks before making a decision, and they would consider different risk management measures to reduce and manage the risks involved, with a view to taking up the redevelopment project and aiming to make a reasonable profit. This section will discuss the employment of risk management measures by developers in Hong Kong.

Lobbying and Legal Framework

All interviewees said that the legal framework in Hong Kong was sufficiently clear-cut and robust. However, some agreed that there was always room for improvement. It would be pertinent that civil servants made decisive decisions. Government nowadays was reluctant to make a decision amongst the diverse views of the society.

They went on to say that more legal proceedings had been instigated by developers in the past few years due to uncertainty about the development parameters allowed for individual sites in planning control. Developers expected to obtain a certain returns but only obtain a proportion of it due to the Government's change in planning control on development intensity. Therefore, they took the case to the court to settle and clarify issues. Legal proceedings were very costly to developers, creating risks in terms of legal costs and longer timeframes.

On lobbying, interviewees said that this was only part of the work. Hong Kong was not so corrupt and information was abundant. Government followed policies and therefore lobbying might not be as effective and important as anticipated. Lobbying did help lower transaction costs by clarifying Government information and affecting policies when needed. It was a kind of multi-level communication.

All interviewees, except one, said that they did lobby the Government. The interviewee who replied in the negative said that there was not much need to lobby Government. Developers had enough information to proceed with development. They would undertake market research. The others who replied in the positive said that, in fact, both Government

and developers lobby each other. Government lobbied developers for information, so as to find ways for Government to support developers better in the development process. For example, the Efficiency Unit under the Financial Secretary was doing such work. Developers, on the other hand, lobbied Government to change the rules of the game.

Effectiveness

The effectiveness of such lobbying would be worth investigating further to understand if developers could lobby Government more effectively.

One interviewee said that lobbying was not as effective today as in the past. Politicians and civil servants were nervous about being in close contact with developers. They were worried about corruption charges from the ICAC (the Independent Commissioner against Corruption), complaints from the LegCo (Legislative Council) councillors, and public protests and complaints from newspaper reporters taking photos of developers having meals with Government officials/politicians.

Another interviewee said that developers with a lot of resources might not necessarily be better off by lobbying. The Hong Kong Government was fair to all. However, developers with more knowledge and financial ability, even if they might not be able to lobby better, would progress faster in the development process. Therefore, risks would be lower for these developers.

How to lobby?

One interviewee said that some developers might bring their case to Government bureau⁴⁹, instead of through Government departments. In so doing, bureau would be faster at reflecting a better and clearer message to Government departments. When in dispute between developers and Government departments, Government bureau were third parties which helped in reviewing cases. Such practice might mean that lobbying was effective.

The Government vs the Market

⁴⁹ Bureau are decision-making entities in the Hong Kong Government whilst the departments are responsible for putting policies into action and taking care of day-to-day management of public issues.

Respondents considered that there was no need for Government to help developers understand the market. They felt it was developers' own responsibility and they had their research departments. Developers were experts in the market, otherwise they could not survive. Developers were inside the market, as operators, and knew the market better than the Government. The Government only possessed broad data and was not closely in touch with the end products as compared to the developers. Developers were close to sales agents and also quantity surveyors who provided sales and cost figures. Open and adequate information was already provided through the Land Registry and (estate) agents or professionals (quantity surveyors).

Richer network through Government

All interviewees however said there was no need for Government to build richer networks for them. Developers were in the market. It was better to allow connection-building to be market-led rather than Government intervening.

They further commented that developers had their own networking and had already built good communication channels with professionals and green groups as well as other interest groups. The latter needed funding and the former wanted to gauge the latter's support. Developers had fixed opinions on how to approach projects and they would talk directly to green groups for particular projects.

They commented that it would be rather helpful if Government were willing to join developers' networks. There was a lack of communication between Government officials and developers because they were afraid of ICAC (the agency against corruption) and newspapers alleging collusion between them.

Provision of Information and Data

Some interviewees said that upholding certainty of information by the Government was considered more important. The problem now was with the development parameters included in statutory plans. Government should stick to the plan and stop moving the goalposts. Government should carefully plan ahead, undertake proper public consultation and Visual and Air Ventilation Impact Assessments.

All interviewees said market information in Hong Kong was easy to obtain, open and adequate. They considered that the information and data provided by the Government were satisfactory. The Land Registry and the websites of Government departments provided most of the information. The Land Registry provided owners' information and transaction evidence. Development parameters were set out in the lease conditions and statutory plans, i.e. the Outline Zoning Plans, and could be calculated under Buildings Ordinances easily. Therefore, information in Hong Kong was very open and adequate. One interviewee said they could also obtain it from external sources, e.g. first-hand sales information from estate agents and cost data from quantity surveyors because they were in the market.

Nonetheless, it was not certain nowadays how much could be built on a plot of land. Such uncertainties happened in the past, but were more pronounced now that the Government was planning a comprehensive review of all the Outline Zoning Plans. It was important to note that land assembly took at least 2 to 3 years to complete and might even take up to 7 to 10 years. Developers would pay a high price for a sudden change in Government policy, if they had already bought sites that subsequently were downzoned.

7.2.5 Comparison of Risks of redevelopment – Hong Kong vs China and the way forward for Hong Kong

The economy in Hong Kong has matured and the rate of growth has been slowing down. On the other hand, residential prices in Guangdong province were relatively lower than in Hong Kong. Some Hong Kong residents were moving across the border as they work and got married in China. Developers were therefore more interested in development in China, which would provide a bigger market, better returns and better long-term potential relative to Hong Kong.

The following will discuss respondents' comments about the comparison of the risks of redevelopment between Hong Kong and China, as well as their suggestions for Hong Kong in future.

Some of the interviewees said that there were different kinds of risks for the Hong Kong and China property development markets respectively. Besides, each individual project would be unique and appraisals and assessments have to be done to decide on the risks of each project.

China

The interviewees commented that developers were in general more interested and involved in China than Hong Kong nowadays as China was currently in an economic boom and growing phenomenally. It had a vibrant property market because of the huge demand for development from its 1.3 billion population and house prices were rising. All of them promised better potential financial rewards. One interviewee said the risk-reward ratio was more favourable in China.

They added that there were many greenfield sites in China as compared to Hong Kong. Government regulations were not so stringent and the officials were facilitating and welcomed development. Therefore, there was much room for developers to negotiate and to take action creatively. In summary, the merits of China's market were that (a) you could build quickly; (b) statutory authorities were facilitating; and (c) there was a reservoir of demand.

They went on to say that these were enough to offset the downside risks of lack of information and the uncertainty created by changing Government policies and bureaucracy. The recent focus had shifted from first to second tier cities to respond to the Chinese Government's intention to develop these second tier cities.

The economic conditions and property market in Shenzhen and other parts of China were improving. The gap between Hong Kong and these cities was closing. Developers would prefer to do businesses in these cities.

Hong Kong

The interviewees contrasted the situation in China with Hong Kong and commented that Hong Kong was a mature market and further growth was limited. Risk played a relatively greater part. Two interviewees said that Governments in Chinese cities were facilitating development whilst the Hong Kong Government was creating a lot of hurdles such as public participation, though Hong Kong had clearer regulations and better information.

They further commented that development in Hong Kong has slowed down due to a number of disincentives. These include politics, high land premiums, planning control and public participation.

Approvals from the statutory bodies – the Planning Authority and the Buildings Authority - were required for redevelopment and development in Hong Kong. Developers also needed to have a contractual agreement with the Lands Department for lease modification and land exchanges. Developers would need to pay premiums for obtaining such lease documents.

One interviewee said that Government charged too high a land premium. Negotiation for a lower premium or a waiver of the premium was more difficult nowadays. The lease modification/land exchange process was prolonged as compared to the past and affected the timeframe of development. Several building planning submissions might be necessary for a project which would lead to a longer development process and the timeframe for development. Added to these were the uncertainties on Gross Floor Area calculations such as exemptions for green features. There was also much uncertainty in assessing development potential now that the plot ratio control and building height control were to be included gradually in statutory Outline Zoning Plans.

This interviewee went on to comment that in a recent submission of development proposals, there was a different interpretation between two different Government departments as to the plot ratio allowed for the development. It took a year of arbitration between the two departments for this straightforward case.

The situation in China where regulations were not clear but there would be a judgment in the end was contrasted with Hong Kong where regulations were clear but decisions were not made as quickly or as decisively. This interviewee suggested that Hong Kong needed an overall decision-maker to coordinate and decide on different comments from different Government departments engaged in the development process.

Another interviewee said that the Government's projection for land supply followed population projections rather than being based on past trends. Developers did not agree with such an approach.

One of the interviewees said that some of the Hong Kong Government's policy and thinking was incorrect, especially the Government's population projections. New Development Areas proposed in the 2007 Policy Address reflected the view that the population would increase and this was wrong. This interviewee believed that the population would remain at more or less the same (at seven million) in the future. Development in Hong Kong had reached saturation point. There was enough housing stock but better units/living environments were needed. There was a changing demand rather than a rising demand.

The following will discuss the issues widely known in the developing industry and academic texts, and elaborated by interviewees in the focus group and interviews.

7.3 Issues widely known in the development industry

There is a general saying that risk and reward are proportional. Interviewees discussed this phenomenon. All, except two, agreed that there was a strong relationship between risk and reward. Developers might add a premium to the required development returns to compensate for risks.

The two interviewees, who did not agree that risk and reward were proportional, said that the relationship was not necessarily direct. Most of the time, risk and reward exhibited a strong relationship. However, the timeframe for a development is generally 3-5 years, and there were many development risks (also referred to as administrative risks) and market risks. Market risks referred to the fluctuation of the property market and general economy. Development risks referred to the uncertainty during the process such as that imposed by Government administrative measures. If the duration of the development was long, risks might be high but reward might be low. In determining whether to go ahead with projects, developers might seek to balance risk and reward but the eventual experience might be different.

Interviewees generally commented that while market risks might be obvious, administrative risks were more prominent nowadays in Hong Kong. By administrative

risks, they referred to the need to obtain Government approvals and the uncertainty in obtaining such approvals in a timely manner.

There were a number of factors affecting development profit. This section summarises interviewees' views about what is commonly known.

7.3.1 Risk and Return

To measure risk, valuation professionals produce reports on costs and returns as well as risk profiles of their respective projects. Risk might be expressed quantitatively as a premium or qualitatively as a caveat or paragraph in the appraisal report.

One interviewee said valuers made appraisals based on historic and current transaction evidence. They did not have a crystal ball to see the future. For instance, an appraiser might think flats could be sold for HK\$ 6,000 per sq. ft., though projection or intuitive feeling might suggest that they could be sold for HK\$ 8,000 per sq. ft. in the economic conditions of the moment. In the latter case, it was only an estimate and there was no evidence to support it, so valuers could not put in the figure of HK\$ 8,000.

Professional valuation might give results very different from back-of-envelope thinking by decision-makers. This showed the risk element. For instance, the manager might be able to squeeze the development timeframe. Instead of valuers' general expectation of five years, the manager pushed the project teams to complete it in 2-3 years. Or, interest rates may be at $r\%$ now. The decision maker is familiar with bankers and may negotiate for $r-1\%$.

Of the variables in a development appraisal, development returns were often thought to be harder to predict than costs. One interviewee said that costs were easier to predict as one could trace relatively steady market trends. But recently, with the massive amount of infrastructure and development in Macau and China, costs were escalating and harder to predict than before. Returns on redevelopment also depended on past trends. However, fluctuations were greater. Such returns also depended on the stock market performance and the general economy, which in turn depended on the global performance.

Another interviewee said that returns depended on market performance and it was very difficult indeed to predict what that would be in 3 to 5/6 years. The URA project in Kwun

Tong will span some 12-15 years, and although the URA could develop in phases, the locals requested that land be assembled at once. Both risk and interest costs would be very high.

From a development appraisal point of view, the most significant problems involved assessing macroeconomic factors. It was very difficult to predict the future. A Government economist might provide some information, but an appraiser also needed to know market performance to calculate the variables in the development appraisal.

To make sure the data and information used in the development appraisals were accurate and up to date, developers would depend on consultants and external professionals. Quantity Surveyors undertook tendering and therefore knew the cost trends better. Sales agents provided the latest transaction data.

Generally, it was considered that the true sensitivity of development variables were taken into account in development appraisals. Sensitivity of sales price fluctuations resulted in a larger discrepancy and affected accuracy. Costs, however, were within a predictable range. It all depended on the level of expected returns. Developers expected higher returns on some projects because risks were higher. Miscalculation was bound to happen. However, information was better provided nowadays and therefore there was less miscalculation. Appraisers had good property development experience, and therefore knew how to calculate and how much of a buffer to put in.

7.3.2 Macroeconomic and Market Conditions

Ratcliffe (2009) commented that the ups and downs in macroeconomic conditions, including the level of interest rates, the level of inflation and the overall outlook of the economy, affected the profitability of schemes and the risks involved. Profitability largely depended on supply and demand conditions in the user market and the investment market, affecting the level of rent, yield and capital values.

One interviewee said redevelopment was demand-led. Developers examined buyers' behaviour and figured out reasons behind the behaviour. The wealth of society and the buy/rent behaviour were important determinants. Developers would seriously look at demand. Returns were considered an indication of demand for property.

Market risks and administrative risks played an important role in determining development profits. The returns on the project were a major type of market risk. This depended on the current and projected market price. It might be subjective. However, one interviewee said that developers were relatively good at forecasting the returns, however difficult it was to predict.

Whilst noting the comments that developers were good at forecasting, some interviewees said that, sometimes, depending on where the developers were in the market cycle at the time of buying the site and selling the flats, the resultant profit could be very different. If they bought when the market was strong and the price was high, there would be a lot of uncertainty. As such, the timing of the sale would be very important. The risk would be high if sale receipts did not cover costs.

This comment was in line with the general understanding that market cycles might be the most important determinant in market risks. Balchin et al (1995) commented further that fluctuations in profitability together with the time taken from site acquisition to completion of a scheme create continuous cycles of development.

7.4 Conclusion

As a summary, macroeconomic conditions and market conditions were two of the major risks of redevelopment due to the cyclical nature of the development industry, changing according to the economic outlook and demand and supply in the market. In Hong Kong, administrative risks played a more important role nowadays than market risks in redevelopment. Administrative risks meant those that were imposed by the Government, the institutions (such as the URA in this context) and agents (such as the public or landowners) in the development context. These could be the statutory obligations such as the need to consult the public in the planning process, the rules and regulations of the Government departments, and the growing involvement of interest groups.

Developers were generally concerned about the recent imposition of building height and other development restrictions in the statutory OZPs, the need to negotiate lowering of the high premium with Lands Department and what they commented as the cumbersome building plan approval process. There were diverging views about the effectiveness of URA in reducing risks to developers in redevelopment scheme. Most of the developers

interviewed considered that URA is effective in acquiring properties and thereby reduce risks in this respect for developers.

The behavioural aspect of risks pricing was also discussed. The financial position and land possession of developers would affect their perspective towards risks. Other human factors include the corporate culture, the ability of the developers, as well as judgement and knowledge of the decision-makers.

The findings of the focus group and interviews were fed into the design of the conjoint analysis, the construction and findings of which will be discussed in Chapter 8.

Chapter 8: Findings of the Conjoint Analysis

8.1 Research Questions and Methods

Chapters 2, 3 and 4 set out in theory the risks of redevelopment and the developers' pricing and management strategy on risks. Chapter 5 looked at the case study of Hong Kong, its development process, developers' actions and the initiatives of the URA. It becomes clear that policy-makers have little knowledge of the way in which developers in Hong Kong perceive various types of major risk in the development process, the pricing strategy of these developers or how they manage risk.

The research thus seeks to examine:

- (a) The main risks that are involved in the redevelopment process. Specifically, it asks "What are the main risk factors that affect developers' project choice in redevelopment?"
- (b) Whether or not the developers trade off one kind of risk with another. Specifically, it asks "Which are the more important risk factors, and to what extent, and for what, are they traded off?"
- (c) How do the major factors namely, planning, the URA's actions, profits and other factors that are each identified as significant individually and in interaction with other factors, affect developers' pricing of risk.
- (d) How does the simulation of the changes in major risk factors affect developers' project choice. Specifically, it asks "To what extent can a change in one or more risk factors alter the developers' perception of risk and therefore make some of the schemes more viable?"

Nature of the Study

The rest of this chapter sets out the findings of the conjoint analysis undertaken with 23 developers who are decision-makers in their respective organisations⁵⁰, the majority of whom are at director level making decisions on project choice in their organisations.

The estimation of developers' project choice has been carried out using a logit regression analysis based on a sample of 460 developers' project choice questionnaire responses. The responses represent 23 developers each answering 20 choice tasks.

The data are collected using the Sawtooth conjoint questionnaire. A sample copy of the conjoint analysis questionnaire is attached at **Appendix X**. The type of conjoint questionnaire employed is a choice-based survey instrument. Respondents answer a series of choice tasks each with ten fixed attributes, with each attribute having a variation of three to five levels. Each task involves the selection of a preferred redevelopment project choice from a set of two randomised alternatives shown in textual information only and a 'none' option. In making the choice, the interaction of the ten attributes and their respective levels are considered by the respondents in a holistic manner.

The variables and levels identified in the conjoint analysis are based on recent academic research on the major factors affecting redevelopment risk (Balchin (1995), Cheshire (2005), Fisher (2006), Gallimore (1999), and Harvey (2004)). The questionnaire was refined after taking on board the findings of the focus group/interviews.

⁵⁰ The selection of 23 developers were based on the following factors : (a) developers should come from different companies. Not more than 3 in one company should be interviewed; (b) they should be decision-makers of managerial level or above; (c) they should have engaged in redevelopment in Hong Kong; (d) respondents should complete the complete conjoint tasks.

8.2 The Model

Logit Equation

$$P_i = f(Z_i) \text{ - Eq8.1}$$

$$P_i = f\left(\alpha + e^{\beta_j \chi_k}\right) \text{ - Eq8.2}$$

$$\ln\left(\frac{P_i}{1 - P_i}\right) = \alpha + \beta \chi_k + \varepsilon_i \text{ - Eq8.3}$$

Where,

P_i	Probability that the i th respondent will make a certain choice given Z_i , a vector of characteristics of the choice representing one characteristics of the n th choice
X_k	variable
α, β	Coefficients
e	The base of natural logarithms
ε	Error Terms

The model is estimated using Binary Logit Regression in which the probability of project choice being taken up is a function of its attributes (specification) and the attributes of the available alternatives. Apart from using the in-built estimation tool in the Sawtooth software to estimate the model, SPSS or similar statistics packages can also undertake the

task. SPSS offers more flexible estimation procedures and a greater range of statistical output with which to assess the model. This research draws on results from both estimation tools.

To estimate the model, both main effects and interaction effects can be measured. Interaction effects refer to the combination of variables can have an additional effect which is distinct from the sum of the individual variable effects. For instance, in this case of redevelopment project choice, profits and uncertainty are closely related in that higher uncertainty will impact on profits and is likely to result in higher or lower profits depending on the respective case. Macroeconomic and market conditions also interact with each other. In a good economic environment, markets tend to be more robust and vibrant, and vice versa. Planning also interacts with other factors. When interacting with profits, full planning permission may increase profits whereas problems in obtaining planning permission will likely reduce profits. Planning also interacts with the URA's actions. The URA may negotiate planning conditions on behalf of developers. With their close liaison and understanding of the planning process and criteria, it is likely that they may be able to negotiate better planning terms.

Experimentation has been done on interaction effects. However, the results of this indicate that nothing significant is found in the interaction effects. The small number of respondents is likely to be the reason. It could also be true that there really are no interaction effects. A larger sample of data would be required to investigate this more fully. Therefore, only the main effects are estimated.

8.3 Modelling Results

	all main effects			all main effects no none option
	base model	75% samples	50% samples	
	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>
[codedans = 0] - Coded Answers	1.936***	1.768***	2.045***	1.223***
[Macroeco = 1] - Interest rates Low, Inflation Low, Economic Growth High	1.041***	0.973***	1.056***	0.872***
[macroeco = 2] - Interest rates and Inflation rising, Economic Growth Moderate	0.436*	0.299	0.391	0.387
[macroeco = 3] - Interest rates - high; Inflation - high; Economic growth – low	0.142	0.220	0.402	0.017
[market_c = 1] - Undersupply in all use class	0.560***	0.391*	0.536**	0.645***
[market_c = 2] - Oversupply in all use class	-1.237***	-1.352***	-1.369***	-1.304***
[lease = 1] - Unrestricted lease	-0.049	0.064	-0.089	-0.298
[lease = 2] - Restrictive Conditions in lease	-0.488**	-0.509**	-0.124	-0.651***
[land_ass = 1] - Options costing up to 5% of site value	0.328	0.459	0.654*	0.138
[land_ass = 2] - Options costing up to 10% of site value	0.116	0.276	0.088	0.014
[land_ass = 3] - Acquired gradually, through intermediaries	0.257	0.360	0.822**	0.365
[land_ass = 4] - Part of your company's land bank, up front acquisition	0.384	0.488	0.654*	0.261
[planning = 1] - Full planning permission obtained	1.489***	1.699***	1.380***	1.518***
[planning = 2] - Your firm can influence planning process	1.035***	1.108***	1.254***	1.070***
[planning = 3] - Planning Permission will be obtained	1.449***	1.651***	1.024***	1.480***
[public_e = 1] - Likely to cause some public protest	-0.254	-0.239	-0.388	-0.448*
[public_e = 2] - Unadventurous but public protest unlikely	-0.246	-0.199	-0.633**	-0.377*
[relation = 1] - With joint venture partner – Good	0.079	-0.169	-0.113	-0.064
[relation = 2] - With joint venture partner – Problematic	-0.352	-0.513*	-0.405	-0.314
[relation = 3] - With Government – Good	0.324	0.285	0.035	0.377
[ura_acti = 1] - Required to share profits with URA	0.037	-0.401	0.270	0.107
[ura_acti = 2] - No Land Premium payable to the Government	0.423	0.288	0.499	0.747**
[ura_acti = 3] - URA negotiates flexible planning requirements	-0.295	-0.478	0.008	-0.121
[ura_acti = 4] - Works well with the public via URA	0.329	0.195	0.106	0.271
[profit = 1] - Around 10% of development value	-1.708***	-1.817***	-1.658***	-1.794***
[profit = 2] - Around 15% of development value	-0.881***	-0.947***	-0.892***	-0.863***
[profit = 3] - Around 20% of development value	-0.061	-0.161	0.174	-0.073

[uncertai=1] - 10% chance profit less than expected	1.351***	1.482***	1.459***	1.522***
[uncertai=2] - 50% chance profit less than expected	1.151***	1.134***	1.069***	1.201***
-2 Log Likelihood	945.396	706.327	495.550	739.494
Pearson Chi Square	920.044	709.837	490.196	729.219
Deviance Chi Square	945.396	706.327	495.550	739.494
Cox and Snell	0.271	0.288	0.277	0.312
Nagelkerke	0.366	0.391	0.374	0.415
McFadden	0.235	0.254	0.241	0.269

Note:

*** means 99% significance

** means 95% significance

* means 90% significance

The following results are derived from the above SPSS binary logit regression estimation. For the base model of all the main effects, the statistically significant factors (based on a significance level of 0.05) are :

- (a) macroeco=1 (Interest rates & Inflation Low, Economic Growth High)
- (b) macroeco=2 (Interest rates - high; Inflation - high; Economic growth – low)
- (c) market_c=1 (Undersupply in all use class)
- (d) market_c=2 (Oversupply in all use class)
- (e) lease=2 (Restrictive Conditions in lease)
- (f) planning=1 (Full planning permission obtained)
- (g) planning=2 (Your firm can influence planning process)
- (h) planning=3 (Planning Permission will be obtained)
- (i) ura_acti=2 (No Land Premium to the Government)
- (j) profit=1 (Around 10% of development value)
- (k) profit=2 (Around 15% of development value)
- (l) uncertai=1 (10% chance profit less than expected)
- (m) uncertai=2 (50% chance profit less than expected)

It is apparent that five main attributes, namely macroeconomic conditions, market conditions, planning, profits and uncertainty of profits, dominate the main effects. The results concur with the expectation in general, except the surprising findings that URA actions and public engagement do not appear to be a major factor affecting project choice. For URA actions, only on the level where ‘there is no land premium payable to the Government’ would probability of developers’ project choice be increased.

The model predicts that planning is an important factor affecting project choice. All three levels relating to ‘problematic to obtain planning permission (planning=4)’ are significant and contribute positively to project choice. The model also predicts that the likelihood of both ‘full planning permission’ and ‘planning permission will be obtained’ are equally valued by developers. Less attractive is when a developer can only influence the planning process. However, even when developers can ‘only influence the planning process’, they will consider it a favourable factor. The probability of project choice by developers for all three types of planning status, except ‘problematic to obtain planning permission’ are strongly significant.

These results accord with the focus group/interviews results in which developers interviewed considered planning a major factor affecting the redevelopment project choice due to the recent amendment to the Town Planning Ordinance that allows more public participation in the planning process. This includes inviting public comments for planning permission, a longer publication period and wider representation scope and power to the public. Public participation in planning is considered to create risk for developers.

Some respondents commented that land use planning can be a major risk in that it takes into account sometimes fleeting public views, which are sometimes contrary to developers' expectations. It restricts the supply of land and puts down restrictive zoning controls for the development intensity of different developments. Whilst planners determine the supply of land by household formation, the demand for housing land is, on the contrary, elastic in terms of household income. There is thus a mismatch, and supply and demand cannot come into equilibrium. Nonetheless, zoning controls also provide certainty to homeowners, restricting the supply of land and the units on the market thereby maintaining the stability of house prices.

The model predicts that profit levels below 20% are a significant negative factor, i.e. there is a strong preference against low profits, which would reduce the likelihood that developers would choose to go ahead with a project. This concurs with the focus group/interviews' results that developers consider profits below 20% to be quite low in the context of Hong Kong. Nonetheless, some developers expressed the view in the focus group/interviews that whether or not a profit of 10% of the development value was acceptable would depend on the size of the project. A sizeable development would bring in a large lump sum and therefore would be worth undertaking. This suggests a possible unmeasured interaction effect with project size, but as noted earlier, no statistically significant interaction effects were found.

Uncertainty in obtaining the expected profits is a significant factor. The model predicts that two of the three levels are strongly significant. This tallies with the findings of the focus group/interviews. Developers interviewed considered a 50% chance of making a profit less than expected as acceptable. They explained that some Hong Kong developers did not trust sophisticated sensitivity analysis, and that therefore the calculated percentage was considered unreliable by developers. However, any uncertainty above 50% would be a warning to developers that the risk may be too high.

The conjoint results here support the current behavioural debates. Though quantitative data (as explained in Chapter 3) are also important, they are overshadowed by developers' judgment. Developers' behaviours and decisions are strongly affected by qualitative information such as market sentiment, user preferences, developers' prior knowledge with the specific property type and/or joint venture partner. The calculation of quantified uncertainty will not be the developers' main concern except when the uncertainty figure is really large, such as up to 75% chance profit less than expected.

Market conditions are another important factor from the modelling results. An 'Undersupply in all use classes' will lead to positive effects on project choice whilst an 'Oversupply in all use classes' will have negative effects on project choice. The model predicts that moving from stronger to weaker expected market conditions significantly and substantially reduces the probability that a project will be chosen. This concurs with the findings of the focus group/interviews as well as the general understanding that strong market conditions will be welcomed by developers who believe that they will generate more income. A number of developers, however, raise the point that if the size of the project is sufficiently large, they can have a greater effect on the market by lowering the price, packaging the product, etc. and are therefore in a better position against competitors.

This is also in line with general economic principles of supply and demand. When there is undersupply, demand is greater than supply and therefore prices will go up inviting developers to build more and faster. Most developers interviewed very much favour an undersupplied market. Their comments mirror economic theory. With demand larger than supply, prices will be pushed up and only in the long term will supply increase to catch up because it will take 3 to 5 years for the construction of flats to be completed. In the short term, prices will remain high and developers can make a large profit.

However, when there is an oversupply, demand is lower than supply. A surplus of flats in the market gives a signal to developers to slow down on planning and construction. Developers are averse to the risks of oversupply. They are concerned about the quantity they can sell and the length of time that it takes them to sell all their stock. An oversupply means it will be difficult to sell completed properties. If the market is inundated with the supply of similar properties, it will increase the competition between developments. With given demand, an oversupply will lead to excess supply in the market. This will force the price down and the length of time that it takes to sell all the properties will be longer than

desired. The costs of holding onto the stock will be higher and the returns of developers will be reduced. In extreme cases, developers may need to cut the price drastically to compete successfully.

It is interesting that the effects of oversupply may not be the same across the different sub-markets. We may see developers hold on to units of luxury flats and office sub-markets to wait for a turnaround in the market whilst other developers will cut prices to ensure rapid sales.

Macroeconomic conditions are another important factor, significant for the level 'Interest Rates Low, Inflation Low, Economic Growth High' and mildly significant for the level 'Interest Rates and Inflation Rising, Economic Growth Moderate'. It is conclusive only that a high and moderate growth economy with low or only just rising interest rates and inflation will result in positive project choice. Respondents prefer high economic growth so that the investment market and the user market will be healthy and favourable. The liquidity of capital in the investment market will be favourable and there will be expansion effects of capital in an environment of high economic growth. The general affordability of users will be higher and the user market will be active. These will ensure better returns for the developers. Low inflation and low interest rates environment will minimise the costs of construction and interests payment will be low. A low interest rate will also mean alternative investment vehicles may not be able to yield better returns than development. All these are favourable to redevelopment.

That macroeconomic conditions are highly significant when interest rates and inflation are low and economic growth is high may mean that very good economic growth and very bad macroeconomic conditions (as in the factor of: recession likely) will be significant factors that developers will consider seriously.

The URA's actions are not considered a major factor probably because developers can generally go ahead with their projects without relating to the URA. During the focus group and interviews, some of them commented that they were concerned about cooperation with the URA which, they believed, would lead to much bureaucracy, thereby prolonging the development process. They would prefer to deal with the Government such as on planning aspects on their own. They also remarked that the aim of the URA was not merely profit-

maximisation and thus would not completely tally with their expectations. As such, some developers may avoid cooperating with URA.

That public engagement is not a major factor might mean that developers lacked concern about public perceptions. As advised by some developers in the focus group and interviews, they would not be too concerned about public engagement so long as the statutory requirements were adhered to.

Validity

Although the number of degrees of freedom for this model is quite high (460 responses), the estimation is still based on a relatively small number of individual people (23 developers who are decision-makers mostly at director level, with a small number at managerial level). Although it is believed that obtaining decision-makers' views is more important and the number of decision-makers in a developer firm is inevitably limited, the concentration of the responses to a limited number of samples suggested the need for some sensitivity analysis.

To assess the stability of the model, three other estimates have been undertaken. The main effects model is repeated on the basis of 75% and 50% random samples of respondents. A new model (see Modelling Results in Section 8.3) is also estimated using only respondents who choose neither of the options when presented with choice pairs. The 'none' option is one of the choices in the conjoint questionnaire, allowing developers, apart from choosing between the two different options, not to choose any of the options at all due to the unattractiveness of the options.

The 75% and 50% model is to test the stability of parameter estimates with respect to sample composition. Results indicate that the main effects model explained above is a true reflection of the actual distribution of the responses collected. There are no outliers.

The 'None' Option

The scenario focusing on the main effects model and discarding the "none" option is done to observe the results of any impact exerted by the 'none' option. It is possible that those choosing 'none' do so because they do not understand the question very well. A large

deviation in the “no ‘none’ option’s” main effects and that of the overall main effects model can suggest that the result is biased. The results of this research, nonetheless, are the same as the other three models, except that [ura_acti=2] i.e. ‘No land premium payable to the Government’ is moderately significant. This significance level of URA’s actions will form an important element in the simulation results to be discussed later.

Model fit - the R^2 figures

R^2 is a measure of goodness of fit in the multiple regression model and is used to compare the validity of regression results under alternative specifications of the independent variables in the model. It measures the proportion of the variation in Y that is explained by the multiple regression equation. The R^2 figures as shown in the figures in Cox and Snell and Nagelkerke are pseudo R^2 figures⁵¹. The model results give an indication that the R^2 results are very similar, the Cox and Snell result is 0.271 whilst Nagelkerke is 0.366. There are no outliers and therefore the main effects model with or without the ‘none’ option provides a satisfactory fit.

Statistically Robust but not Representative

The model is estimated using a small number – only 23 –respondents. There is a high degree of freedom though, because each respondent answers 20 tasks making a total of 460 responses. The statistical assessment indicates that the model is statistically robust. The remaining question is whether it is representative because of the small number of respondents. However, the sample is never intended to be representative.

Conclusion on Main and Interaction Effects

The main effects model gives a very good idea of the factors that drive choice. However, it is hard to tell the relative importance of these factors, i.e. how much one factor would be traded off against each other. It is also uncertain what the results would be if more than one factor changes at the same time. The extent of such impacts would be more clearly exhibited in a simulated environment in order to view the result when changing major

⁵¹ Pseudo R^2 is a rough measure of explanatory power of the model. When conducting maximum likelihood regressions, Pseudo- R^2 , which is similar to the R^2 of ordinary least square, explains how well the estimates capture the variability in the data (Rasmusen blog <http://www.rasmusen.org/x/2005/10/17/r2-and-pseudo-r2/>).

variables. Therefore, the analysis now moves on to a simulation based on the model estimates.

Interaction effects between variables has been tested, but no significant results are found. It may be because of the limited number of respondents, as indicated above. Nonetheless, this does not mean that the research has not considered the interaction effects between variables. Rather, the Sawtooth conjoint software of Choice Based Conjoint Analysis considered in-built interaction effects amongst all ten variables. Respondents made decisions based on the assessment of all ten variables at once.

The next section discusses the simulation results. This gives a clearer indication of the extent to which each of the major factors drives choice and the results if more than one factor changes at the same time.

8.4 Simulation

In this section, the analysis is extended to simulation using the Sawtooth Software ‘Choice Based Conjoint’ program (see Chapter Six– Methodology which has a detailed section on conjoint analysis).

The respondents’ main effects model provides aggregate respondents’ utility or part-worth estimates. The main advantage is that it yields information on the major factors that will affect project choice. However, it is difficult to predict the impact of several factors changing at once by simply looking at the main model results.

The simulation exploits this information to estimate the impact of a change in more than one major factor on developers’ project choice. Simulation lets us gain a better idea of the estimate of the overall impact on probability of choice.

The simulation follows a number of steps:

1. All ten attributes and their respective levels outlined in the table displaying the modeling results are included in the simulation except ‘Land assembly’ and ‘Stakeholders relationship’. The attributes/levels are the factors and main

characteristics derived in the focus group/interviews. They are identified as the main ones in the redevelopment process in Hong Kong. The two factors ‘Land assembly’ and ‘Stakeholders relationship’ are removed because they were found to be insignificant in the main effects model.

The most likely scenarios in the current macroeconomic/market and development context are chosen. ‘Current’ means simulating the economic, market and development conditions at the time of the research when the financial tsunami⁵² is affecting developers’ project choice and decisions tremendously. It is possible that in times of less than satisfactory economic and market performance, developers will hesitate to invest in redevelopment areas. The Government may need to step in to lift some barrier to redevelopment or to lower risk in the process so that more schemes will come on-stream. The simulation will investigate these aspects.

The benchmark scenario assumes ‘imminent recession’, ‘oversupply in all use classes’ in the market, ‘profits and uncertainty’ at ‘15% and 50%’ respectively. ‘Lease conditions are restrictive’, which is normal in the redevelopment context. ‘Public Engagement’ is assumed to be difficult as it was ‘likely to cause some public protest’. ‘Planning permission is fully obtained’ and ‘the URA actions’ assumes it is a requirement to ‘share profits with the URA’.

2. The simulation model assumes that developers face a choice between two scenarios: the benchmark, and one other. The model then calculates the shares of preference for each of the two scenarios based on the logit results examined earlier. In this way, the predicted impact of different combinations of attributes on choice can be calculated.
3. A series of variations in the scenario on four major factors, namely Macroeconomic Conditions, Planning, the URA’s Actions and Profits are undertaken. Simulation against the baseline conditions and varied conditions are devised and the developers’ share of preference calculated.

⁵² Financial tsunami refers to the widespread effects of the aftermath of the severe downturn in the worldwide financial market and housing market which started in 2008.

The simulation results are summarised in four sections below, namely the effects on profits and planning permission, the interaction between profits and state intervention, as well as planning and the economy. They will also be explained below.

Please note that in the following, the four attributes: Macro refers to the macroeconomic conditions, Planning means the planning aspects, URA means the actions of the URA. Profits are inclusive of risk premiums.

The numbers given under these headings (please see scenarios below) are the different levels of these respective attributes. A list of the relevant levels is as follows:

(a) Macroeconomic conditions

1. Interest rates - low; Inflation - low; Economic growth – high
2. Interest rates and inflation - rising; Economic growth – moderate
3. Interest rates - high; Inflation - high; Economic growth – low
4. Interest rates - high; Inflation - high; Recession likely

(b) Planning aspects

1. Full planning permission obtained
2. Your firm can influence the planning process
3. Planning permission will be obtained
4. Problematic to obtain planning permission

(c) URA Actions

1. Required to share profits with the URA
2. No land premium payable to the Government
3. URA negotiates flexible planning requirements
4. Works well with the public via the URA
5. URA mediates between Government and you

(d) Profits (Risk Premiums Included)

1. Around 10% of development value
2. Around 15% of development value
3. Around 20% of development value
4. Around 25% of development value

The following scenarios are derived from varying the levels of each attribute. They represent different combinations of factors affecting developers' redevelopment project choice.

Shares of preference indicate the probability that the developers will choose the respective scenario given the two choices. The simulation assumes that developers must choose one of the two scenarios, so the total share of preference for the two scenarios is 100%.

Profits

	Macro	Planning	URA	Profits
Scenario 1	4	1	4	2
Scenario 2	4	1	4	3

Shares of Preference

Scenario 1 32.55

Scenario 2 67.45

The shares of preference indicate that when full planning permission is obtained, and profits increase from 15% to 20%, the shares of preference increase from 32.55% to 67.45%.

	Macro	Planning	URA	Profits
Scenario 3	4	2	4	2
Scenario 4	4	2	4	3

Shares of Preference

Scenario 3 32.55

Scenario 4 67.45

The shares of preference indicate that when full planning permission is replaced by being able to influence planning process, and profits remain as increasing from 15% to 20%, the shares of preference remain at 32.55% to 67.45%.

	Macro	Planning	URA	Profits
Scenario 5	4	4	4	2
Scenario 6	4	4	4	3

Shares of Preference

Scenario 5 32.55

Scenario 6 67.45

The shares of preference indicate that when it is problematic to obtain planning permission, profits remain as increasing from 15% to 20%, the shares of preference increase from 32.55% to 67.45%.

The three simulation results above reinforce the finding that profits are a major consideration in developers' project choice. The result of a profit increase from 15% to 20%, as planning permission turns from 'full permission' to 'being problematic to obtain', the URA measures remain as 'works well with the public via the URA', the shares of preference remain as 32.55% to 67.45%. This suggests that developers regard an increase in profit from 15% to 20% is adequate compensation for the deterioration in outlook for obtaining planning permission.

Planning

	Macro	Planning	URA	Profits
Scenario 7	4	1	1	2
Scenario 8	4	4	1	2

Shares of Preference

Scenario 7 79.21

Scenario 8 20.79

The simulation indicates that the shares of preference for a full planning permission relative to problematic to obtain planning permission are 79.21% and 20.79%. This confirms the focus group/interviews results that planning permission is also a major factor affecting developers' project choice.

	Macro	Planning	URA	Profits
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Scenario 9	4	2	1	2
Scenario 10	4	4	1	2

Shares of Preference

Scenario 9 72.93

Scenario 10 27.07

The shares of preference indicate that the shares of preference for being able to influence planning policies relative to problematic to obtain planning permission is 72.93% and 27.07%. The slight reduction in preference of being able to influence planning policies as compared to a full planning permission in scenarios 7 and 8 confirmed the value of full planning permission in influencing developers' project choice.

	Macro	Planning	URA	Profits
Scenario 11	4	1	1	2
Scenario 12	4	4	1	3

Shares of Preference

Scenario 11 65.04

Scenario 12 34.96

As profits increases from 15% to 20%, the shares of preference for being problematic to obtain planning permission increases from 20.79% (Scenario 8) to 34.96% (Scenario 12). This validates the previous section's discussion on the paramount importance of profits in

influencing developers' project choice. The increase in profits from 15% to 20% will partly offset the negative effect of problematic planning permission by 14%.

	Macro	Planning	URA	Profits
Scenario 13	4	1	5	2
Scenario 14	4	4	5	3

Shares of Preference

Scenario 13 65.04

Scenario 14 34.96

With a change in URA action from 'Required to share profits with the URA' to 'URA negotiates between Government and you', the shares of preference remain the same as in previous scenarios. This may mean that the URA action 'URA negotiates between Government and you' is not material in influencing developers' project choice.

Interaction between profits and state intervention

	Macro	Planning	URA	Profits
Scenario 15	4	1	1	2
Scenario 16	4	4	2	3

Shares of Preference

Scenario 15 55.73

Scenario 16 44.27

The change in URA action from 'Required to share profits with the URA' to 'No land premium payable to the Government' is an increase in share of preference from 35% (as in Scenarios 11 and 12) to 44%. A nil land premium payable to the Government is another form of subsidy to reduce land costs and thereby increase profits. This, together with the conclusion in Scenarios 13 and 14, which indicate no effect of state action, confirms that developers will welcome Government's action to increase developers' profits rather than any other kind of intervention.

	Macro	Planning	URA	Profits
Scenario 17	4	2	1	2
Scenario 18	4	4	2	3

Shares of Preference

Scenario 17 47.26

Scenario 18 52.74

If the developer is only able to ‘influence planning policies’ rather than having ‘full planning permission’, the share of preference decreases by 8% from 55.73% (Scenario 15) to 47.26%. This supports the previous proposition that full planning permission is of paramount importance to developers’ project choice.

Planning and Economy

	Macro	Planning	URA	Profits
Scenario 19	2	4	1	2
Scenario 20	4	4	1	2

Shares of Preference

Scenario 19 62.97

Scenario 20 37.03

If the macroeconomic conditions change from ‘moderate growth’ to ‘recession likely’, other factors such as planning, the URA’s actions and profits being equal, the share of preference changes from 63% to 37%. When this is compared with Scenario 7 and 8, ‘recession likely’, it indicates that coupled with ‘problems in obtaining planning permission’, the share of preference will decrease from 79.21% in Scenario 7 to 62.97% in Scenario 19, i.e. a 17% decrease.

	Macro	Planning	URA	Profits
Scenario 21	2	4	1	2
Scenario 22	4	2	1	2

Shares of Preference

Scenario 21 38.34

Scenario 22 61.66

If the macroeconomic conditions change from ‘moderate growth’ to ‘recession likely’, but the planning situation changes from ‘problems in obtaining planning permission’ to ‘able to influence planning policies’, the share of preference increases substantially from 37% (Scenario 20) to 61.66% (Scenario 22), i.e. an increase of 24.66%.

	Macro	Planning	URA	Profits
Scenario 23	2	4	1	2
Scenario 24	4	1	1	2

Shares of Preference

Scenario 23 30.41

Scenario 24 69.59

If the macroeconomic conditions change from ‘moderate growth’ to ‘recession likely’, but the planning situation changes from ‘problems in obtaining planning permission’ to ‘full planning permission obtained’, the share of preference increases substantially from 37% (Scenario 20) to 69.59% (Scenario 24), i.e. an additional increase of 12.6% from Scenario 22.

	Macro	Planning	URA	Profits
Scenario 25	2	4	1	2
Scenario 26	4	4	2	2

Shares of Preference

Scenario 25 53.97

Scenario 26 46.03

If the macroeconomic conditions change from ‘moderate growth’ to ‘recession likely’, but the URA’s action changes from ‘required to share profits with the URA’ to ‘no land premium required’, the share of preference increases from 37% (Scenario 20) to 46.03%

(Scenario 26), i.e. an increase of 9%. This may imply that no land premium negotiated by the URA would be welcomed when the macroeconomic conditions are very bad, i.e. a recession is likely. As mentioned in Scenarios 15 and 16 above, a nil land premium has the same effect as an increase in profits.

	Macro	Planning	URA	Profits
Scenario 27	2	4	1	2
Scenario 28	4	2	2	2

Shares of Preference

Scenario 27 30.75

Scenario 28 69.25

If the macroeconomic conditions change from ‘moderate growth’ to ‘recession likely’, but the planning conditions change from ‘problems in obtaining planning permission’ to ‘able to influence planning policies’ and the URA’s action changes from ‘required to share profits with the URA’ to ‘no land premium required’, the share of preference increases from 46% (Scenario 26) to 69.25% (Scenario 28), i.e. an increase of 25%. Compared with Scenario 22, there is an increase in probability of project choice from 62% to 69%, i.e. a 7% increase. This confirms the importance of Government administrative measures on developers’ project choice, especially when relaxing planning aspects is coupled with the URA action of successfully negotiating no land premium.

8.5 Overall Effects of the Simulation

Profits

The simulation models confirm that profits is the paramount factor affecting developers’ project choice in redevelopment. Whatever the status of planning, when profits increase, the share of preference remains favourable to higher profits.

The following scenario comparisons confirm such a proposition.

When profits increase from 15% (Scenario 8) to 20% (Scenario 12), the developers’ project choice increased by 14%, which is moderately high amongst all the scenarios.

Scenario 26 indicates that a nil land premium negotiated by the URA, which has similar effect to an increase in profits by lowering costs, will increase project choice by 26%.

When Scenario 8 is compared with Scenario 16, and the latter involves a nil land premium negotiated by the URA together with an increase in profits from 15% to 20%, the probability of project choice by developers increased by 24%. When Scenario 10 is compared with Scenario 18, with the same status as mentioned, i.e. a nil land premium negotiated by the URA together with an increase in profits from 15% to 20%, the probability of project choice by developers increases by 25% from one requiring a premium to be paid to the Government.

Another explanation for the low probability of project choice when profits falls below 20% may be due to the diverging types of developers and their objectives. Some large developers hold on to large portfolios and are able to manage reasonable risks within their overall corporate packages, as mentioned in Chapter 2. As such, they may be able to absorb losses in a year or two, or in one or two projects. The other way round, they may be able to give up some less promising projects as they still have a sizeable portfolio off hand for maintaining operations. As for smaller developers, they may choose to specialise and limit their exposure to only limited types of properties to reduce risk and maximise returns. Their analysis of the development process based on their company objectives may be different from others.

Planning

Planning is another major factor affecting developers' project choice. The effect of planning is on the setting of development parameters and granting permission for certain kinds of uses and the extent of these parameters. All these will in turn affect profits. A developer commented during the conjoint interviews that planning would affect whether the development could indeed go ahead or not. Planning had an impact but the effects could be mitigated with an increase in profits. Fisher and Robson's (2006) research on the risks of office development with 63 UK developers confirmed that 'there was a strong consensus amongst interviewees that planning permission had become much more difficult, expensive and time consuming to obtain in recent years'.

The following confirms such a proposition.

Scenario 7 suggested that if developers can obtain full planning permission, as compared to only able to influence planning policy (Scenario 9), the probability of project choice would increase by 7%.

Scenario 24 confirmed that in times of imminent recession, full planning permission will increase project choice by 8% as compared to 'only able to influence planning policy' (Scenario 22). In a similar imminent recession period, nonetheless, if developers are able to influence only planning policy, but there are possibilities of a nil land premium negotiated by the URA, the probability of project choice will also increase by the same, 8% (Scenario 28). This indicates that Government action and increasing developers' profits will both substitute for the effect of full planning permission.

Full planning permission in times of imminent recession rather than only able to influence planning policy, whilst holding constant an increase in profits from 15% to 20% and a nil land premium negotiated by the URA, will increase probability of project choice by 8% (Scenario 17 compared with Scenario 15).

State Action

The URA's action in negotiating between Government and developers is not well received by respondents i.e. developers. The model estimated that it has no major effect on developers' project choice (Scenarios 13 and 14 compared with Scenarios 11 and 12). Nonetheless, if the URA negotiates for no land premium payable to the Government, the model predicts there will be about a 10% increase in shares of preference (see analysis above). The reason may still mean that profits are a major factor. With no land premium payable to the Government, land costs will be reduced and profits will therefore be increased.

Planning and Economy

The interaction of Planning and the Economy (Scenario 10 compared with Scenario 21) indicates that when macroeconomic conditions improve from imminent recession to moderate economic growth, the probability of project choice will increase by 11%.

As indicated above in the profits and planning in the overall simulation, when recession is imminent, developers welcome favourable planning conditions (i.e. being able to influence planning or that full planning permission has been obtained). If this is added to 'no land premium payable to the Government', the share of preference improves even further. This mean that when a recession is likely, profits still have a major impact on developers' project choice. Besides, being able to influence planning is important in times of imminent recession as developers can buy time and negotiate for better terms whilst waiting for an upswing in the market.

8.6 Discussion and Conclusion

The results in the conjoint analysis above concur with those put forth by other researchers and referred to in Chapter 2. As Cheshire (2005) concluded, land use planning policy, by affecting the supply of land, has an impact on the price of land. His call for a more flexible and less restrictive planning policy, however, may not be fully supported by the conjoint result. Rather, developers, apart from preferring to secure full planning permission, attach a high probability of project choice if they can affect planning policy. They are wary of any Government intervention which may inflate or deflate land prices, since the markets are cyclical and developers react to market trends closely. If planning cannot provide certainty but increase or decrease the supply of land in line with the market cycle, the time lag inevitably involved will likely exacerbate or intensify the disequilibrium. It is a more flexible but not less restrictive planning policy that developers are looking for. That means they consider certainty in planning parameters favourable, providing confidence for developers' investment decisions.

However, a certain flexibility will be necessary. A flexible planning policy will allow developers to negotiate for the betterment of their landholdings. Besides, a restrictive planning policy will constrain the supply of land and therefore benefit developers with landholdings. On the other hand, if planning policy is less restrictive, the supply of land may be greater than demand and depress prices which is not good for developers' profits.

In Chapter 2, it was reported that Fisher and Robson (2006) found that the macroeconomic and market conditions, as well as profits and the uncertainty of obtaining profits (namely

the ‘investment market and yields’, ‘rental value and incentives’ and the ‘letting market’) were the major perceived risks. Other risks fell sharply at the time of construction, namely those related to land assembly, construction, interest costs, and planning. The main effects and simulation models both confirm that profit is a major factor affecting developers’ project choice.

Certainly, state intervention, such as through the URA in Hong Kong, has long been established to have an impact on redevelopment risks. This has been discussed in Chapter 3. The results of the conjoint analysis indicate that the URA’s actions are particularly favoured by developers when the macroeconomic conditions are less than favourable. Developers, nonetheless, prefer less intervention from the Government and to have a free hand to redevelop on their own.

Chapter 9: Conclusions and Recommendations

9.1 Introduction

This final chapter aims to address the research questions and summarise the main findings derived from combining the qualitative interviews and focus group with the quantitative conjoint analysis. General conclusions drawn from the findings are presented, and a few recommendations are suggested for future research, which have arisen from the implications of the results of this research. In the final summary, I will discuss the policy implications of the research and my hope for the future of redevelopment in Hong Kong.

9.2 Research Aims and the Main Findings

As a start, a recap of the aims of this research and the research questions may assist the readers to understand better the relevance and meanings of the findings. Research aims, which were presented in the methodology chapter are to :

- (a) examine factors affecting developers' choice of redevelopment projects in Hong Kong (HK);
- (b) analyse the relative importance of these factors affecting HK developers' risk perception and choice of redevelopment projects;
- (c) analyse the impact of planning, the actions of the Urban Renewal Authority (URA), profits and uncertainty on risks of redevelopment to HK developers; and
- (d) analyse any implications on policy direction in reducing developers' risks to make redevelopment schemes in HK more viable.

The research follows closely and is guided by these research aims and objectives. Several conclusions have been drawn at the end of the study. However, the intention of this behavioural research is to acquire an understanding of decision-making by those developers as one influential actor in the process. Therefore, these findings and conclusion may not be generalisable to all those working with developers, nor will it reveal behaviour of all decision-makers. As this is a study concerning developers, decision-makers of other development firms may themselves identify with many issues and arguments presented in this thesis, which will hopefully enhance their understanding of the decision-making behaviour. It is hoped that those contemplating redevelopment, who may not be developers

but owner-occupiers will learn from these developers' understanding of risks. Of course, the results apply only during the time that the study was conducted. In a vibrant and ever evolving economy and property market in Hong Kong, a replication of the study in the future may offer different results, after much macroeconomic and market changes have taken place as well as the emergence of other determining or influencing factors.

As a result of this study, the researcher arrived at the following conclusions.

1. The focus group and interviews data show that –

- The major risk factors to redevelopment in Hong Kong are planning and public participation in the development process. With the recent amendment to the Town Planning Ordinance in response to changing public expectations, wider public participation power has been conferred and the statutory plans were amended to lower development intensity but these have increased administrative risks to developers engaging in redevelopment in Hong Kong. Developers expect that the Town Planning Board (TPB) in Hong Kong will make equitable and consistent decisions rather than being swayed by individual NIMBY⁵³ public comments. To achieve this, there should be a revamp in the way the TPB conducts its decision-making process. Arguments and comments put forth by applicants and the public for a particular project should be debated and the viewpoints discarded one by one as in the judicial court.
- In land acquisition, there are diverse developer styles. Some made very decisive decisions which could be considered as instinctive. Others made very informed and disciplined decisions that they would undertake comprehensive and precise appraisals before buying any piece of land. Land banks played a strong role in developers' planning of redevelopment. If the Government changes the goal posts by amending the development parameters of land, developers can be adversely affected.
- Most developers agreed that there is not much urban blight and stigmatisation in the older parts of Hong Kong. The urban renewal problem arises mainly because

⁵³ NIMBY – abbreviations for 'not in my backyard'.

of market failure in bringing demand and supply together in some areas, especially for redevelopment of the high-rise blocks that proved less financially viable for developers. Developers consider the URA in Hong Kong strong in assembling apartments and buildings in multiple ownership. However, the URA's other actions are not too valued by developers because the latter can always conduct redevelopment on their own without needing help from the URA, unless it is a URA's project. Developers consider the URA a quasi-Government organisation that will add onto risks through prolonged process. Moreover, the URA is seen as competing with developers in redevelopment. Nonetheless, some developers think that working with the public sector will take away the obstacles of the development process, especially in dealing with the Government. It may be considered that URA can focus on land acquisition and planning aspects and leave the rest to the developers to handle.

- Profits and uncertainty in obtaining the expected profits are important factors too. Developers consider profits for a project of around 20% too low but the percentage may be acceptable for a sizeable project that brings in strong and big income.

2. The conjoint analysis shows that –

- **planning** is an important factor affecting project choice. All three levels are significant and contributed positively to project choice. The reason being the recent amendment to the Town Planning Ordinance which allows wider public participation in the planning process. The public participation in planning aspect is considered to create risks to developers;
- **profit** level below 20% are significant but the effects are negative. Nonetheless, some developers considered that whether a profit of 10% of the development value was acceptable would depend on the size of the project. A sizeable development would bring in a large lump sum and therefore would be worth undertaking. This suggests an unmeasured interaction effect with size;
- for **uncertainty** in obtaining the expected profits, developers consider a 50% chance of making a profit less than expected is acceptable. They explain that some Hong Kong developers do not trust the sophisticated sensitivity analysis and the

calculated percentage is therefore considered unreliable by developers. However, any uncertainty figure above 50% will give a warning to developers that the risks may be too high;

- for **market conditions**, an ‘Undersupply in all use class’ will lead to positive effects on project choice whilst an ‘Oversupply in all use class’ will have negative effects on project choice. The model predicts that moving from stronger to weaker expected market conditions significantly and substantially reduce the probability that a project will be chosen;
- It is slightly unexpected that the **macroeconomic condition** is only significant when interest rates and inflation are low and economic growth is high. This may mean that only ‘very good economic growth’ and ‘very bad economic condition to the stage of recession likely’ will be significant factors developers will consider;
- **URA actions** are not considered a major factor probably because developers can generally go ahead with their projects without relating to the URA. During the focus group and interviews, some of them commented that they were concerned about cooperation with URA which they believed would lead to much bureaucracy thereby prolonging the development process. They would prefer to deal with the Government on their own. They also remarked that the aim of the URA was not merely on profit-maximisation and thus does not completely tally with their expectation. As such, some developers may avoid cooperating with URA; and
- **public engagement** is related to the changes in the planning requirement for wider public participation. However, developers consider it not a major factor which may mean that developers lack concern about public views. As advised by some developers, they would not be too concerned about public comments so long as the statutory requirements are adhered to.
- Simulation of the trade-offs of four major factors conducted. The Overall Effects indicated that **profits** is the paramount factor affecting developers’ project choice in redevelopment. Almost whatever the status of planning, the share of preference remained favourable to those with higher profits. **Planning** is another major factor affecting developers’ project choice. The effect of planning is on the setting of

development parameters and granting of permission for certain kind of uses. These will, in turn, affect profits. Planning had an impact but the effects could be mitigated with an increase in profits. **State Action** is not a strong influence on risks of redevelopment. The **Macroeconomic Condition** also interacts with **Planning** aspect. When recession is imminent, developers welcome favourable planning conditions. Being able to influence planning in times of recession is important as developers can buy time and negotiate for better terms whilst waiting for an upswing in the market.

Some factors can and cannot be compensated for as outlined in Chapter 8. Profits is of paramount importance. Planning action can be offset by an increase in profits. Developers will be willing to negotiate for better planning terms which may take longer timeframe so long as the profits are high. A less than satisfactory macroeconomic and market conditions can be compensated by better planning status and higher profits. Likewise, URA actions that allows no land premium can compensate for other factors as this will mean increase in profits.

9.3 Research Implications

Chapters 3 and 4 discussed the neoclassical approach, which has dominated the research direction of land and property redevelopment. As explained, the neo-classical approach predicts that the most effective criteria in reducing risks for developers in redevelopment projects would be that related to planning, and the influence of the general economy and market conditions. Above all, the prospect of higher profits would help to mitigate higher risks on a project by project basis.

Though neo-classical approach has been dominant research direction, this research adopts a behavioural approach. The main reason for this was that the behavioural approach had potential to tease out the back-of-mind thinking of the developers and discover the reasons for their decisions. Based on the results from the focus group and interviews of this research as mentioned above, the following hypotheses that may be constructed a-priori in relation to developers' views on main factors that contribute to risks include :

- developers may be averse to the creation of negative public sentiment in relation to a proposal;

- developers may not wish to engage in urban renewal projects in which the planning procedures and requirements are restrictive;
- developers may be wary of engaging with public institutions generally; and
- developers may be cautious about engaging in projects in which an element of decision-making is governed by political rather than market processes.

The findings from the conjoint analysis of this research support some of these behavioural hypotheses, especially that planning procedures and requirements are considered restrictive and difficult to influence. Nonetheless, it was revealed that increase in profits may offset the effect of planning constraints. On the contrary, there is no empirical support for adverse impacts from the actions of URA. The model estimated that it has no major effect on developers' project choice. The only level that is significant is the waving of land premium to the Government through URA negotiation, which effectively is the impact of profits. This means developers are indifferent towards engaging with public institutions, the URA in Hong Kong.

In spite of the research findings of the behavioural approach, we cannot rule out the relevance of the neo-classical approaches completely. They are still useful in explaining the big picture of developers' decision-making and attitudes to risk. Developers are still responding, as neoclassical theory predicts, to risks, returns and economic factors. The importance of profits, planning, uncertainty and volatility of the economy and markets are still adversely affecting developers' decisions.

In that context, additional insight is added by the behavioural approach. It intensifies the understanding that profits, planning requirements and procedures, the economy and market conditions are major risks affecting developers' project choice. In addition, it clearly reveals that profits can compensate for other risks. State action has an impact but largely due to planning procedures and requirements. The actions of URA do not exhibit as strong an impact.

The above discussion indicates that this research has added to our understanding of the way developers see risks but that neo-classical drivers are still very important. In that context, the following recommendations for policies of future Government and its quango,

i.e. URA, designed to reduce risk should continue to emphasise economic and market aspects of risk. However, crucially, policies should also be designed in recognition that the very presence of Government intervention through planning policies and the URA actions are themselves likely to represent risks from the perception of developers. Thus, policies probably need to go further than the simple reduction of market risk (as the Government in Hong Kong appears to be doing at the moment), and should also compensate developers for the additional risks represented by state intervention itself. This may not mean monetary compensation but fine-tuning of policies.

The merit of adopting behavioural methods is that, if worked out with the right respondents, especially those making decisions, it helps tease out the back of mind decisions for developers' actions. Together with neoclassical models which portray the wider picture, they will provide a clearer evaluation of the criteria for developers' risk reduction.

9.4 Policy Implications

The following will discuss some further thoughts about what the results obtained from this piece of research can offer.

Planning

Against the general views of the developers, i.e. wider public participation in the planning process has only prolonged the part of the process for the longer exhibition period of statutory plans for public inspection. In fact, the timeframe for processing planning permissions and consideration of representations to a new or amended plan have remained for the same period. It is inevitable as Hong Kong is transforming into a knowledge and more democratic society, public participation needs to be improved for the benefit of the public. Developers' schemes which are beneficial and accepted by the society will not be unduly affected.

Public participation is a necessity for land use planning in Hong Kong. However, the way forward may rest on fine-tuning the procedures and the practice. The Town Planning

Board should prepare internal guidelines on how the Board makes decisions. When considering respective planning applications, planning-related questions may be asked during the deliberation process and each question discarded one by one and the justifications recorded in the minutes to form best practice guidance.

Planning guidelines on how much weight Town Planning Board would put on different kind of public comments should be drawn up now that the practice of seeking public comments has been put in place for about five years. The question may be how best to manage public comments and that reasonable decision-making is important. Indecisive behaviour and poor decisions will have impact on timing, costs and interests payment of developers, all affecting risks.

All in all, it is important to handle the risks associated with public participation, allow developers to lobby the Government for a more stable and reliable provision of information, and a more consistent and reasonable decision making.

On redevelopment, there is a lack of a coherent and holistic Government planning and redevelopment policy which could help bring development back to built-up areas. Planning policies are put forth and implemented by the Government Planning Department whilst redevelopment is initiated and implemented by the URA. In the private sector, there is a clear division of labour but inadequate consideration of the strategic and district-wide land use planning concept. An overall plan for redevelopment or regeneration of whole planning district will be necessary and helpful in conveying the Government's redevelopment priorities and proposals for owners and developers to follow.

On this note, it is worth discussing the acquisition of properties and land for redevelopment. It is considered that the market mechanism should be the basis of real estate development or redevelopment, whilst the Government may impose some regulations and measures on planning aspect to make sure the market operate efficiently and to achieve the Government's planning intention.

Lum et al. (2004) compared the two kinds of market-led policy initiatives launched by Singapore Government to promote redevelopment. They commented that the multiple ownership of urban land and the problems of minority unwilling to sell and obstructing the land acquisition process were acute in prime urban land due to the high market value. The

first measure, employed before the Land Titles (Strata) (Amendment) Act came to operation in late 1999, provided density bonuses in the form of higher plot ratio to some private urban sites through the statutory town plans. The second measure was the legislation facilitating en bloc sale, the Land Titles (Strata) (Amendment) Act, which enabled majority rather than unanimous consent from existing landowners, reducing the percentage required for collective sale from 100% to 90% (if the development is less than 10 years old) and 80% (if the development is more than 10 years old).

The second measure was more successful in increasing the supply of privately owned land, inducing the amalgamation of private land and providing more housing units. The result of the first measure on higher plot ratios led to piecemeal redevelopment of urban fragments and thus the unintended adverse impacts on the environment. This contrasted with public sector redevelopment which would have more regard to the overall community needs (such as ‘proper coordination and phasing, allowing a gradual and smooth transition from old to new and from low to high density’ (p.9)) and the environmental concerns (‘with sites left out of the amalgamation scheme becoming isolated or hemmed in by new and more intensive developments with little opportunity for redevelopment to similar intensities due to small plot size’ (p.9)). These private redevelopments are usually ad hoc and ‘could not tie in with public infrastructure and services enhancement’ (p.9). Lum et al. (2004) cautioned that whether and when redevelopment took place depends on ‘effective demand and the state of the private residential market’ (p.12). Nonetheless, the building boom in the 1990s in most countries have passed since the baby boomers were getting old. Besides, the past efforts and redevelopment process focusing on lower-rise older stock in dilapidated conditions cannot be replicated on medium to high-rise developments where ‘marginal viability of redeveloping them will make it difficult for private developers’ (p.12). Besides, the market is unable to coordinate redevelopment efforts and would only accelerate economic but not physical or functional obsolescence.

This ‘implementation gap’ (Lum (2004, p.12)) seen in Singapore is also present in Hong Kong. Adequate planning and other institutional measures should be imposed especially as the Government has reduced the threshold for compulsory resumption of private properties by developers to 80%. It is noteworthy that ‘profit-maximisation is largely reactionary, uncoordinated and market-determined’ (p.12). This goes back to the suggestion that a territory and district-planning framework would be required to guide the macro and micro aspects of urban redevelopment, including the programme/priority of

redevelopment area, the scale and form, the supporting infrastructure and open space as well as the community building for different schemes. The planning frameworks will also serve to gauge public and local residents' comments on the way forward for redevelopment of their area.

Land

Ownership constraints with regard to fragmented ownership, different expectations especially on price and valuation have led to a long acquisition process. By different expectations, it means that owners in the same building may have a different idea about the timing for redevelopment or rehabilitation of the building. Hope value and property value may be different from property price. Hope value means owners' expected price. Property value refers to the intrinsic value of the property or land, including its use, exchange and emotional value. These value figures may be very different from property exchange price which will be determined by the equilibrium in market demand and supply conditions. Market price may also be largely affected by the relative lack of power of the individual owners who are quite disorganised in Hong Kong as compared to the developers who are few and powerful in Hong Kong. Land rent therefore may be accrued to developers.

It is also interesting to note that the majority of real estate development sites in urban Hong Kong are in multiple ownership. Developers in Hong Kong generally retain the ownership of open spaces, internal roads, car parks and other common areas even after these undivided shares⁵⁴ of the estate were sold out. This was especially the case before 1987 revision of the Deed of Mutual Covenant⁵⁵ which governs management of estates/buildings in Hong Kong.

Li (2004) commented that the appreciation of property units price in the estate may not benefit the developer 'who owns large common areas to become the largest shareholder in the community. His vested interest is therefore, not in the successful management of the

⁵⁴ It is the share of the premises affected in the building bears to the total number of shares into which the building is divided (Definition from Land Registry Website).

⁵⁵ Deed of Mutual Covenant (DMC) is a common law device in Hong Kong, a legally binding document signed by the developer and the first purchaser of a flat in a building and the property manager appointed to manage the building. This document is then binding on all subsequent purchasers of any unit in the building. Before the revision in 1987 of the DMC, the developers of the estate determined the covenant and assigned their own managers. Due to increasing complaints, after 1987, the Government revised and made the DMC fairer to the public.

community, but in another agenda (p. 134) such as controlling the votes. The ‘decision is to prevent any potential opposition to other decisions made in relation to the utilization of space in the community from the developer’s point of view’ (p. 133) such as for increasing the scale or expansion of development in the estate.

The researcher’s concern was the redevelopment of the estates in the future. Noting the developer owns the largest share of the estate in the form of common areas, they would have the largest say in the redevelopment of these medium to high-rise estates. Li (2004) commented that ‘the manager will be able to prevent any objections to their plan. This may mean sometimes working against the best interest of small individual owners’ (p. 129).

Such management of voting results may mean opportunity for redevelopment but on another note, the possible suppression of individual owners’ rights may also be a concern for Government to impose measures on redevelopment in the current review of the Urban Renewal Strategy.

The URA

There is market failure in some parts of urban areas in Hong Kong, in particular the problem with acquisition of properties. This is due to the mismatch between asking price of owners and developers’ expected profits. There are, of course, untraceable and defective titles. Stigmatisation is not a problem as most parts of Hong Kong are relatively accessible and proximity of different districts in such a small territory means that purchasers of properties have full knowledge, obliged to take up locations according to their budget, and therefore they will not be put off by certain districts. The press reported that the only stigmatised area in Hong Kong is Tin Shui Wai, which is a mainly public rental housing area in the northern border of the territory. Even there, developers are attracted to develop private property developments taking advantage of the low land price at the border and the potential with gradual amalgamation with Shenzhen in the southern border of China adjoining Hong Kong.

The effectiveness of the URA lies in its acquisition of properties and land, fulfilment of planning and lands requirements, and therefore it provides sites for developers for straightforward development right away after obtaining the building plan approvals.

Nonetheless, as mentioned above, the statutory obligations for URA to take into account social impact whilst operating at prudent commercial principles have restricted its impact on urban renewal, including redevelopment.

Noting that some developers welcome the URA's actions but others consider the URA to be in competition with them, it may be worth reconsidering the role of the URA in the redevelopment process. The URA may be focused on the other 3 Rs i.e. rehabilitation, preservation, and regeneration but leaving redevelopment to the market and the URA thus serves as a last resort to acquire only those non-viable schemes. Criteria should be set up on what is meant by non-viable schemes. Valuation and building age may be some indicators.

The URA has to operate according to prudent commercial principles and thus focus mainly on viable schemes. Non-viable schemes are slow in the take-up even by the URA. It may be worth the Government rethinking of the role of the URA. Since developers consider URA in competition with them for profits and the community press for the URA to pay more regard to environmental and social aspect of redevelopment, the role of the URA may need to change from seeking profits for sustaining long-term operation to that of bidding for funding from the Government based on the urgency and suitability of redevelopment schemes put forth. Besides, the URA should act only as a last resort in redevelopment, entering the market only when it fails such as for some dilapidated but persistently non-viable schemes. The Government should set out the criteria on the age and condition of buildings, long delay in redevelopment progress and viability for private developers. The URA should be more responsive to market conditions and seek projects that are left out by the market.

With market failure in urban redevelopment in Hong Kong, it has been argued that the Government should consider employing the URA as the last resort in handling those redevelopments that the market will not undertake, or it may risk crowding out the private developers' opportunities. Other problems of the URA identified include insufficient options for owners' participation and reduced redevelopment potential as a result of building density/height control.

9.5 Recommendations

In relation to the general study, the implications of the findings may lead to further exploration of some very specific areas. They include:

Research recommendations

- Due to a limited number of respondents in the conjoint analysis, it may be more appropriate to propose recommendations rather than draw conclusions from it. Below are some of the recommendations for organising a similar conjoint analysis for elsewhere or in Hong Kong again in the future.
- A longitudinal study that covers a longer time-frame and seeks to look at the difference in developers' risk perceptions and responses in different market conditions is suggested.
- A comparative study between different but similar cities such as that between Hong Kong and Shanghai or Shenzhen in mainland China, or between Hong Kong and New York in the States or London in United Kingdom will provide interesting and deeper insights on geographical differences in developers' risk attitudes.
- Wider and larger number of developers' participation in the conjoint analysis would be likely to yield more substantial results that can better generalise the developers' behaviours.
- It would also be worth understanding landowners' behaviour in Hong Kong in their buying and sale strategy of different parcels of land in the already built-up area. Their decisions and power against the developers certainly affect the developers' redevelopment project choice. It would be interesting to know if the individual owners are apprehensive or can strive to appropriate a larger portion of the economic rent in face of the few and powerful developers in Hong Kong. The issue will be for future research to examine as the ambit of this research is on developers' behaviour in redevelopment.

Practice Recommendation

- The Town Planning Board should fine-tune its decision-making process, to make it more transparent and systematic. Guidelines should be set out on how much weight would be given to individual comments.

9.6 Final Summary

The decision to undertake this thesis was prompted by my personal and family experiences and the ageing of the high-rise buildings in the city, Hong Kong, where I am living. Most buildings in Hong Kong were developed in the 1980s onwards and are high-rise, of high existing plot ratio and large Gross Floor Area. Noting the lack of Government resources in initiating redevelopment for all buildings when they have reached the end of their building age, there may be a necessity and an opportunity for owner-occupiers redevelopment of their properties. However, property owners lack incentives, pressure, resources and expertise to initiate redevelopment. Redevelopment is after all a high-risk, capital intensive and expertise demanding business. It is not easy for individual owners to engage in the redevelopment process.

This research has shown that redevelopment, by nature, is a risky business. Whether we like it or not, redevelopment will sooner or later become a necessity for most owner-occupied property. It is hoped that this piece of research will shed light on the major risk factors and the relative strengths of these factors in affecting project choice, as well as the trade-offs made by developers for these major factors.

One last personal note...

Napoleon Hill wrote, 'Effort only fully releases its reward after a person refuses to quit'.

The book of Deuteronomy records, 'You shall not remove your neighbour's landmark, which the men of old have set, in your inheritance which you will inherit in the land that the Lord your God is giving you to possess'.

I therefore believe that owner-occupiers deserve to know the risks and returns of redevelopment to enable them to decide whether they engage in redevelopment or participate as owners selling their properties onto developers.

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Appendix I Developers

1	939	China Construction Bank Corporation - H Shares	1,530,132.66	9.11
2	5	HSBC Holdings plc	1,517,658.16	9.03
3	941	China Mobile Ltd.	1,484,452.30	8.83
4	883	CNOOC Ltd.	536,923.78	3.20
5	1398	Industrial and Commercial Bank of China Ltd. - H Shares	522,425.40	3.11
6	2888	Standard Chartered PLC	401,095.17	2.39
7	3988	Bank of China Ltd. - H Shares	348,172.75	2.07
8	16	Sun Hung Kai Properties Ltd.	306,950.70	1.83
9	2628	China Life Insurance Co. Ltd. - H Shares	271,974.95	1.62
10	700	Tencent Holdings Ltd.	249,041.82	1.48
11	762	China Unicom (Hong Kong) Ltd.	248,532.27	1.48
12	13	Hutchison Whampoa Ltd.	235,977.57	1.40
13	1	Cheung Kong (Holdings) Ltd.	232,311.28	1.38
14	3328	Bank of Communications Co., Ltd. - H Shares	218,881.80	1.30
15	11	Hang Seng Bank Ltd.	213,170.47	1.27
16	857	PetroChina Co. Ltd. - H Shares	202,549.44	1.21
17	2388	BOC Hong Kong (Holdings) Ltd.	192,847.51	1.15
18	2318	Ping An Insurance (Group) Co. of China Ltd. - H Shares	178,081.60	1.06
19	66	MTR Corporation Ltd.	158,943.26	0.95
20	388	Hong Kong Exchanges and Clearing Ltd.	150,436.87	0.90
21	19	Swire Pacific Ltd.	139,771.22	0.83
22	688	China Overseas Land & Investment Ltd.	139,514.76	0.83
23	2	CLP Holdings Ltd.	125,360.07	0.75
24	494	Li & Fung Ltd.	124,045.99	0.74
25	101	Hang Lung Properties Ltd.	123,966.38	0.74
26	3	Hong Kong and China Gas Co. Ltd., The	122,553.58	0.73
27	1088	China Shenhua Energy Co. Ltd. - H Shares	121,329.40	0.72
28	12	Henderson Land Development Co. Ltd.	119,788.23	0.71
29	4	Wharf (Holdings) Ltd., The	117,727.57	0.70
30	386	China Petroleum & Chemical Corporation - H Shares	113,100.49	0.67
31	322	Tingyi (Cayman Islands) Holdings Corp.	97,210.20	0.58
32	1109	China Resources Land Ltd.	96,158.71	0.57
33	1688	Alibaba.com Ltd.	91,318.14	0.54
34	6	Hongkong Electric Holdings Ltd.	88,785.28	0.53
35	836	China Resources Power Holdings Co. Ltd.	76,320.38	0.45
36	267	CITIC Pacific Ltd.	73,851.57	0.44
37	998	China CITIC Bank Corporation Ltd. - H Shares	73,666.71	0.44
38	83	Sino Land Co. Ltd.	72,570.67	0.43
39	3968	China Merchants Bank Co., Ltd. - H Shares	70,423.21	0.42
40	1880	Belle International Holdings Ltd.	67,305.18	0.40
41	17	New World Development Co. Ltd.	65,821.76	0.39
42	330	Esprit Holdings Ltd.	65,516.81	0.39

43	291	China Resources Enterprise, Ltd.	63,258.88	0.38
44	683	Kerry Properties Ltd.	63,136.32	0.38
45	1038	Cheung Kong Infrastructure Holdings Ltd.	62,554.33	0.37
46	144	China Merchants Holdings (International) Co. Ltd.	61,577.40	0.37
47	1044	Hengan International Group Co. Ltd.	61,270.51	0.36
48	151	Want Want China Holdings Ltd.	60,627.24	0.36
49	1211	BYD Co. Ltd. - H Shares	57,341.13	0.34
50	392	Beijing Enterprises Holdings Ltd.	53,338.48	0.32
		Total	11,869,770.36	70.64
		Market Total	16,803,095.52	100.00

Appendix II Government Approval Process for Redevelopment in Hong Kong

The major players in Hong Kong redevelopment are:

(a) the Government.

The Government is the landlord who owns effectively all the land in Hong Kong.⁵⁶ It releases land at auction and controls the amount of lease modifications or land exchanges for redevelopment to be issued each year.

(b) the Urban Renewal Authority (URA).

The main agent responsible for urban redevelopment, renewal and regeneration in Hong Kong.

(c) the Hong Kong Housing Authority

set up in 1954. Constructs and manages 95% of the public housing in Hong Kong. Houses about 40% of the population (HKHA (2009 website information)). Supports the URA in re-housing tenants affected by redevelopment projects.

(d) the Hong Kong Housing Society

A voluntary organisation providing affordable housing and related services for the people of Hong Kong from the post-WWII period onwards. It has also pioneered in many areas: for example, it took the lead in introducing professional housing management expertise from the UK to manage its rental estates; developed sandwich class housing; implemented various loan schemes for the Government; developed senior citizen housing, participated in urban renewal and assisted owners of old private buildings in building management and maintenance. Supports the URA in re-housing affected tenants. Signed a Memorandum of Understanding in 2002 with the URA to share parts of the redevelopment work for the URA.

⁵⁶ Except one piece of land - St. John's Cathedral.

The bureau of Government responsible for land and property development in Hong Kong is the Development Bureau, which oversees the Planning and Lands Branch. It also includes the Works Branch, which houses the engineering departments responsible for infrastructure and major public works in Hong Kong.

Figure 2.13 summarizes the major division of work in the Development Bureau and the Planning, Lands and Buildings Departments which are the major players in the Government deciding on redevelopment proposals. The major requirements for any redevelopment scheme are related to the planning, land matters/lease and buildings aspects. The statutory planning process under the Town Planning Ordinance is the ambit of the Planning Department and the Town Planning Board (TPB). Land matters and lease aspects are the contractual agreements between the Government and the developer or property owner. They are dealt with by the Lands Department. The buildings aspects mainly focus on the structural and building safety of a redevelopment as laid down in the Buildings Ordinance and Building (Planning) Regulations. They are requirements of the Buildings Authority and are administered by the Buildings Department in Hong Kong.

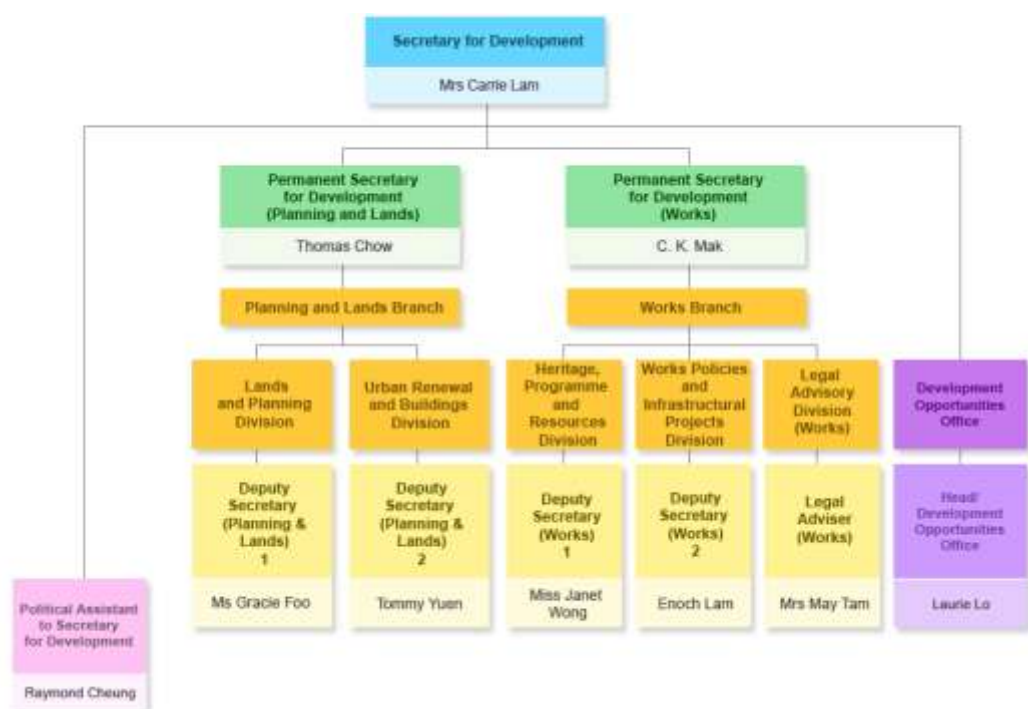


Figure 2.13 Structure of the Development Bureau (adopted from Development Bureau website)

Redevelopment in Hong Kong may be initiated by private developers or by the URA. In the case of developers, when they have identified a site suitable for redevelopment, they would conduct (re)development appraisals to assess the financial viability of the site for redevelopment, i.e. whether it is able to produce adequate returns to compensate for the risks associated with redevelopment. Several respondents who operate in the property market in Hong Kong commented that some Chinese-owned development companies would not undertake development appraisals upfront. They would, however, assess from their own experience and acumen how much the site should be priced upon completion. Then, they would ask the valuation professionals to work backwards whether positive returns would be realised after deducting the expected acquisition costs.

Unlike developers whose aim is to maximize profits, the URA, by its mandate, also assesses the wider environmental, economic, social and sustainability impacts that the proposed redevelopment would bring about. Even for sites not ripe or financially viable for redevelopment, the URA might consider undertaking such projects taking into account the potential benefits to the environment, society or economy. The URA can therefore attach redevelopment potential to a site. In other words, the URA would bring about redevelopment potential to a site if the properties concerned met the criteria for renewal.

Once the Board of Directors of the URA and the Financial Secretary of the Hong Kong SAR Government have agreed that a site is to be included in the five-year Corporate Plan and the Annual Business Plan for redevelopment, the URA will undertake a freezing survey of the land titles and tenant information for the properties. The URA will offer an owner-occupier compensation at the market value (of a seven-year-old) flat in a comparable condition and similar location plus an ex-gratia allowance. Tenants will be re-housed into public or subsidized flats through the Hong Kong Housing Authority or the Hong Kong Housing Society, or they can opt for an ex-gratia allowance and if the criteria are met, a cash incentive as well.

Figure 2.12 in Chapter 2 outlines the statutory approval process for redevelopment. Under the current Land (Compulsory Sales for Redevelopment) Ordinance, once the developer has acquired 90% of the properties or the URA has acquired 80% of the properties in a redevelopment project, they can either negotiate a mutually agreed price for the remaining titles with the property owners, or seek land resumption by the Government. In the case of a developer, it will submit their case to the Lands Tribunal, which will determine the merit

and justification for resumption of the remaining units. In the case of the URA, it can seek approval from the Chief Executive in Council who will then direct the Lands Department of the Government to instigate the resumption through the Urban Renewal Authority Ordinance directly.

The first statutory requirement to be met would be to obtain planning permission under section 16 or section 12A of the Town Planning Ordinance (TPO) from the TPB for a change of land use from say, industrial buildings to residential buildings. The permission, for instance, could also be for the increase in the development intensity from a seven-storey pre-war residential building to a 47-storey residential block with modern facilities. Other forms of planning application may also be required, such as applications for addition, alteration and modification of an existing building, amendments to the originally approved planning scheme, such as a change in the layout and disposition of blocks, the unit size, number of flats, car parking ratio, provision of Government, institution and community uses and open space on site, and the phasing and implementation schedule of the redevelopment.

The developer would hire professionals, such as town planners or other professionals such as architects and surveyors to handle the planning application on its behalf. Sometimes, the developer would have in-house staff handling such applications. It is noteworthy that only the broad use, basic development parameters and overall development concept would need to be considered by the TPB.

The professional will seek to obtain planning permission and maximize development intensities. It is noteworthy that under the Town Planning Ordinance, public comments on the planning applications will be invited. The TPB will give due regard to these public comments in considering the application. **Appendix III** gives details of the planning process for the developer. The OZP for the area where the developer's site is located might be revised from time to time. The development parameters for the developer's site might be adversely affected. In such cases, the developer or the general public may submit representations to the TPB against the amendment to the OZP as gazetted⁵⁷. Such representations will be published for public comment.

⁵⁷ The Government Gazette, first produced 159 years ago, is normally published on Friday in seven parts

Once planning aspects of the redevelopment have been dealt with, the developer can proceed on to the lands matters aspects.

Lease Aspects

A private property rights system is adopted in Hong Kong. The rights to own, transfer and use land and real estate properties are protected by law. The Joint Declaration signed on 19 December 1984 between China and Great Britain on the future of Hong Kong secured a status quo for land interests for 50 years.

The colonial history of HK has resulted in the establishment of a land tenure system. All land in HK, except St. John's Cathedral, is solely owned by the Government. The Government leases land to private developers on a lease term of a certain number of years, generally 50 years after year 1997 until 2047. The developers then sell the development in the form of flats to individual owners and the latter pay an annual rent to the Government with a premium set according to the land value.

Ng and Cook (1997, p.5) commented that 'the Government of Hong Kong has a dual role as the biggest landlord and as an administrator which determines the development agenda in the executive-led polity in the territory ... Government has relied heavily on land sales as a major source of revenue.' 'Government (has) vested interests in land-related developments (Ng, 2008, p.169).'

Land supply in Hong Kong comes from four main streams:

- (a) Government auctions under the Land Application List;
- (b) Tendering of projects along the railways by the Mass Transit Railway Corporation;
- (c) The redevelopment programme of the URA; and
- (d) Lease modifications and land exchanges of private land or tender and private treaty grant of Government land.

consisting of Ordinances, Regulations, Bills, periodical lists of professionals and institutions and Public Notices such as trade mark registrations, companies winding up, bankruptcies, transfers of business, etc.. (Government Logistics Department (2000))

These four main methods will be explained in the following paragraphs.

Once the plan for a Development Scheme by the URA has been approved by the Chief Executive in Council, an application for resumption will be made to the Lands Department within 12 months. Or, in the case of a Development Project, the URA will make an application within 12 months after the project has been authorized by the Secretary of Development. Once resumption is made, the URA will tender the project to developers or undertake the project on its own. No further land procedures will be entailed as the land premium is waived for URA projects.

Auction, tenders and private treaty grants may not be directly related to redevelopment, whereas lease modifications and land exchanges would often be entailed in a redevelopment scheme.

Except for an unrestricted lease, the major sections in leases contain the user clause, the building covenant, stipulation of the development conditions and the requirements for submission of a Master Layout Plan. The Building Covenant sets out the time frame in which the development should be completed. It is usually four years after the land documents are completed. The user clause states the uses allowed, such as private residential, industrial, or commercial. The development conditions restrict the maximum gross floor area, plot ratio, site coverage percentage and building height allowed on site. A design, disposition and height clause is usually included to ensure the design of the development is to the satisfaction of the Government. Other requirements in terms of infrastructural provision, such as run-in and run-out of the site, access road alignment and dimension, drainage and water pipes provision, as well as the fulfilment of environmental requirements are included in other sections of leases.

In a redevelopment, if the lease governing the site includes some restrictive clauses, such as low development intensity, e.g. plot ratio and gross floor area allowed, the developer would usually apply for lease modification with the LandsD after obtaining consent from the TPB for a higher development intensity. If the changes involve amalgamation of sites and changes in the site boundary, land exchanges would be triggered. When a developer wants to change the terms of lease of land, such as its use or development restrictions,

lease modifications and land exchanges have to be undertaken and a land premium⁵⁸ would be levied according to the difference in market value between the old lease and the new lease. For redevelopment, lease modifications or land exchanges are usually undertaken.

Auction and Land Application List

Before 1998, the Government held regular land auctions to sell several plots of land at a time to the highest bidder. On 22 June 1998, the Government suspended land sales by way of auction or tender for the financial year 1998 – 1999 due to the severe downturn in the property market upon the onset of the Asian Financial Turmoil. On 20 April 1999, 9 months after the halt in land sales, the Government announced a Land Application List system whereby a list of land available for auction or tender will be put up for developers to bid for. To succeed, the developer has to offer a minimum price that needs to be acceptable to the Lands Department (LandsD). Having succeeded in applying, the developer has to pay a deposit to LandsD, and the latter would put up the land for public auction or tender. If the minimum price is achieved, the deposit would either be included as part payment of the purchase price (if the applicant won the bid), or if another company won the bid, it would be returned without interest within one week of the auction/tender.

The Secretary for Housing, Planning and Lands, addressing the Legislative Council in 2005, commented on the Government's land sale policy through the Land Application List as follows:

‘the Application List system has provided a market-led mechanism that can decide the timing and amount of land to be put on sale in a flexible manner..... provides transparency, consistency and predictability to the real estate industry and market participants.’

In a sense, the application list system allows the market to decide when and which land to be released from the Government's list of sites. This is more favourable when property market sentiment is not favourable.

⁵⁸ According to the Lands Department of the Hong Kong SAR, modifications, whether by modification letter or conditions of exchange, shall be granted at a premium reflecting the difference between the "before" and "after" land value.

Tenders and Letters A & B will be explained in **Appendix IV**.

All private building developments in Hong Kong are controlled by the Buildings Department under the Buildings Ordinance and allied legislation. A developer needs to appoint an Authorized Person (AP), such as a structural engineer, before carrying out building works to prepare and submit building plans for the approval of the Building Authority under the Buildings Ordinance. He also needs to appoint a registered contractor to carry out the building works.

The Buildings Department will check building plans for compliance with the law relating to development in Hong Kong. Under the centralized processing system, concerned Government departments will be consulted and may offer advice and comments, including requirements they deem necessary under their respective ambit and legislative provisions. This ensures all statutory standards, safety and other legal requirements are met.

The AP and engineers employed are required to fulfill their statutory responsibilities to co-ordinate, supervise and carry out building works and submit stability certificates and test reports. If the Building Authority identifies any breach of statutory provisions, it may order works to cease or to be remedied.

The Building Authority will issue consent to commence building works, monitor sites with work in progress, inspect sites regularly to ensure safety and that the works comply with statutory requirements and make final checks before issuing an occupation permit.

The Real Estate Developers' Association, commenting on the Town Planning Ordinance Review, remarked that '[t]he existing "segmented" submission and approval processes managed by the Lands Department, Buildings Department and PlanD should be streamlined by keeping the procedures and fee charging systems of the three Government departments as simple as possible.'

Though nothing has been done to streamline the procedures, as one of the measures to improve the system, in a speech to the public in 2005, the Secretary for Planning and Lands announced that the Government will provide more regularly updated information on residential land supply figures in Hong Kong, hoping that this will reduce the uncertainties and swings in the housing land market. The Government has kept a database of private and

public housing supply, which monitors private residential development projects. The list contains information on the following:

- (a) units currently under construction
- (b) completed but unsold units
- (c) units that can be built on residential sites for which a premium has been paid or lease modifications have been completed;
- (d) units in sites sold by the Government in the past year, and
- (e) public housing supply under the Home Ownership Scheme undertaken by the Housing Authority.

Although different developers have their own projections of market demand, the database provides more authoritative information on the housing supply data to facilitate developers in making redevelopment decisions.

The Government is reviewing the URS and seeking LegCo approval for amending the Land (Compulsory Sales for Redevelopment) Ordinance to facilitate private developers' land assembly so that for certain classes of lots, a lower compulsory sale threshold of 80% will be attached under the Ordinance.

Appendix III Planning Application Process for the Developer

The applicant submitting the application will first look at the statutory plan covering the site, which will likely be an Outline Zoning Plan if the area falls within an urban. The Outline Zoning Plan (OZP), as its name denotes, is a zoning plan which indicates the permissible and non-permissible uses (see Plate 1 for an extract of the Notes of the OZP). Four different types are identified: (a) uses which are permitted as of right in the particular zone (Column 1 uses), (b) uses for which permission would be required from the TPB (Column 2 uses) in the particular zone, i.e. a section 16 application is needed, (c) uses which are always permitted in all zones (see Plate 2 for the Covering Notes which describe these uses), and (d) uses which would not be permitted. A list of uses and the definition of the terms of these uses are provided by the TPB and the Planning Department. The applicant can assess which category his proposed use falls into by reference to this list and the OZP.

For the last type of use, i.e. a use not permitted under the OZP, the developer and its professional agent may submit a section 12A application for amendment of the OZP to allow rezoning of the site from its current use to the intended use of the developer.

For both section 12A and section 16 applications, public comments will be sought by the Government Planning Department. The Town Planning Board will consider the paper providing assessment of the application and the public comments received, which are submitted by the Planning Department.

If permission is given outright as in situations (a) and (c), or permission for the s.16 or s.12A application(s) is/are given, the developer can proceed to consider the lease aspects.

If the application was rejected or the developer was not satisfied with the conditions attached to the permission, the developer could ask for a review of the TPB's decision under section 17 of the TPO. The review would be conducted in a hearing at which the applicant can present his case in front of the TPB members. If the review is approved, the developer can again proceed to the lease aspects. If, however, the review is rejected or the developer was not satisfied with the conditions attached to the permission, he can lodge an appeal to the Town Planning Appeal Board under section 17A of the TPO.

If the appeal is allowed, the developer can again proceed to the lease aspects. Otherwise, in the case of the appeal being dismissed, some developers could seek judicial review in the High Court in Hong Kong. The High Court simply looks at whether due process has been followed, but recent court cases on planning aspects also debate the substance of the case. In either case, the Court might quash the decision of the TPB and ask the TPB to reconsider the application.

Appendix IV Tenders and Letters A & B

Tenders are for disposal of land where the uses allowed are very much confined and not all developers would be interested. Private treaty grants are usually for uses with a public purpose. For these two types of land disposal method, there is no obligation for the Government to accept the highest bid. Such allowances ensure that the Government can allocate land to the most suitable person. This happened in the Cyberport development⁵⁹ when in 2000, the Government allocated prime land at a low price to a listed company, PCCW, to build a high-technology node without putting up the land for auction to the highest bidder. In the Cyberport case, there was an outcry from the development industry and the public that there was collusion between Government and PCCW and that the practice was unfair. Since then, the Government has not repeated a similar tender exercise.

Letters A/B are “land exchange entitlements granted by the Government before 1983 in consideration of the surrender of any agricultural or building land in the New Territories (i.e. the rural area in HK) to the Government”. They were mostly issued when the Government was building the new towns in the New Territories in the 1970s and 1980s.

Most established and major developers in HK have created their own land banks. The portfolios are mainly of agricultural land in HK’s new towns, built up over time in the 1970s and 1980s, and for future development. Developers would negotiate with the Government for a change of use from agricultural to other uses upon proposal of a development scheme. They can convert their land to a more valuable use by paying a premium to the Government. They manipulate the timing of using these agricultural lands in hand only when the market sentiment is favourable and therefore pay at the “bottom-of-cycle prices” but reap the peak market price. These major players therefore enjoy a competitive advantage over smaller players and late-comers to the market. According to Yiu (2004), these land banks “enable developers to maintain smooth production levels regardless of Government supply levels, and to bid high to forestall new entries into the

⁵⁹ Cyberport is a US\$2 billion (HK\$15.8 billion) landmark project focusing on enterprise and professional development, and helps commercialise creative ideas and incubate start-ups. It has a cluster of creative ICT and digital content tenants who enjoy synergies from co-locating with each other. The Cyberport aims to be Hong Kong’s unique Creative Digital Community. It is home to four Grade-A intelligent office buildings, a boutique hotel, a retail entertainment complex and about 2,800 deluxe residences (Cyberport homepage). PCCW was awarded with development and sells the residential blocks for a profit.

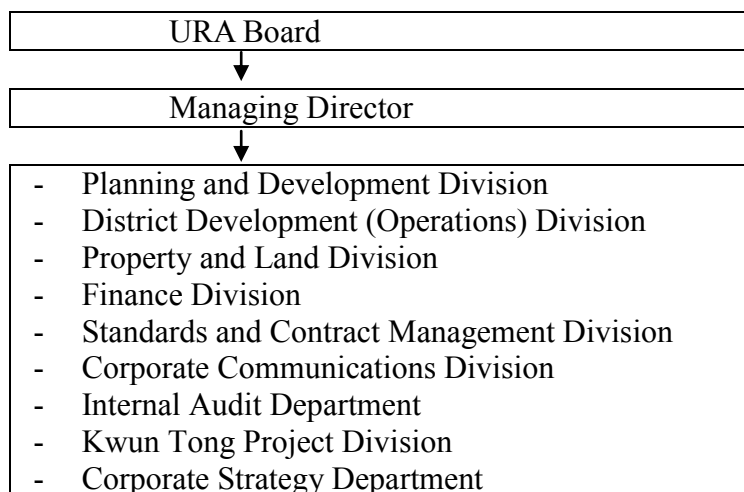
market while at the same time increasing the asset value of their existing portfolio”. To avert the problem of capital being tied up in these land assets, developers negotiate with villagers when the market price is low and when the land can at that time only be used for agricultural purposes. They then pay an initial small proportion of the costs to the villagers and agreed to pay the full costs only after successful conversion of the use of the land to some higher-order use upon full planning permission being obtained.

The Consumer Council study in 1996 on the contestability of the real estate market noted that the larger and established developers who were able to acquire cheap agricultural land gradually in the New Territories, mostly in the 1970s and 1980s, through Letters A/B can reap an enormous 77 percent to 364 percent profit. Nevertheless, those smaller and later-comers to the market can only obtain land through other high-cost channels such as land auctions with profit margins ranging from a mere 6 percent to 109 percent.

Appendix V The URA – Supplementary Details

The URA is governed and managed by the URA Board⁶⁰. The day-to-day management is overseen by the Managing Director. Under him, the staff fall into seven divisions and two departments as follows:

The Organisation and Structure of the URA



The URA has to prepare a Five-year Corporate Plan to setting out its strategy and direction for the next five years and to prepare a work programme in its annual Business Plan based on the framework in the Urban Renewal Strategy issued in 2001. The corporate plan comprises about 80 redevelopment projects to be completed in the next five years and the business plan sets out the projects to be completed in the next financial year which comprises about ten redevelopment projects. Both corporate and business plans have to be approved by the Financial Secretary. Priorities on undertaking projects would be set based on the urgency for slum clearance and the pace of rejuvenation of old districts, chance of voluntary rehabilitation as opposed to wholesale redevelopment, financial resources available and public expectations at the time of consideration.

⁶⁰ The Board currently comprises the Chairman, the Managing Director and an Executive Director, eighteen non-executive directors who are non-officials and four non-executive directors who are public officers to the Board. Members of the Board are appointed by the Chief Executive of the HKSAR Government.

The 4Rs Approach

As mentioned above, the URA adopts the 4Rs and the area-based approach to bring about holistic renewal of the wider area to unlock hidden potential. For instance, a project's focus may be on the redevelopment of a cluster of dilapidated residential buildings without sanitary facilities. Buildings of special architectural or historical merit will be preserved. At the same time, other old buildings in the vicinity might be provided with the needed infrastructure such as sewers and could be rehabilitated. They will be brought to life again and the shopping and leisure activities on the ground and lower floors as well as the vibrant local community networks will be revitalized through improvement to the building façade, streetscape, business management and maintenance of services.

Projects undertaken

In its first five years of operation, the URA has accorded priorities to the former Land Development Corporation projects and has announced the implementation of some 300 projects, including three 'early-launch' projects in Sham Shui Po, Tai Kok Tsui and Wan Chai. By 2009, the URA had commenced 37 redevelopment projects redeveloping about 500 dilapidated buildings and improving the living conditions of about 5,800 owners and 5,700 tenants, assisting in the rehabilitation of about 400 buildings, and revitalising and preserving over 25 pre-war buildings.

A list of redevelopment projects being currently being undertaken by the URA is attached at Figure 2.14. The most recent and ambitious scheme is the Kwun Tong Town Centre Redevelopment. It covers an area of 53,500m² of 24 buildings of below 10 storeys accommodating 4,700 people and over 500 shops and hawker stalls. Upon completion, it will be redeveloped into a project of not more than 401,250 m² with a commercial space of 209,640m², Government, Institution or Community facilities of 16,300m² and 2,000 flats.

These results suggest that the use of a single, standardized, and validated instrument to assess the impact of the intervention on the target population is a key factor in the success of the intervention.

Figure 2.14
Appendix))

Planning Procedures

The URA may implement a project by way of a development project or a development scheme. A development scheme requires zoning amendment in the statutory outline zoning plan for the site where the project is located. A development project does not require such an amendment. The public may raise objections to the development project and development scheme of the URA under the URAO and the TPO respectively. Objectors may also appeal against decisions of the URA and TPB on both the development projects and development scheme under the respective Ordinances. A summary of the projects undertaken by URA over the seven years since its establishment in 2002 is provided in Figure 2.14 in Appendix V.

Appendix VI Planning Procedures stipulated in the URAO

(adapted from Ng, Cook and Chui (2001, p. 179 Table 3))

Urban Renewal Strategy (Clause 20)

The Secretary of Planning and Lands is responsible for preparing an urban renewal strategy. “The Secretary shall consult the public before finalizing the strategy in such manner as he may determine” and he/she need not disclose information which it would not be in the public interest to disclose.

Corporate Plan (Clause 21)

The Urban Renewal Authority (hence the Authority) shall not later than 3 months before the end of each financial year submit to the Financial Secretary for approval a draft corporate plan for a period of 5 years.

Business Plan (Clause 22)

The Authority shall submit to the Financial Secretary for approval a draft business plan for the next financial year.

Publication of Project (Clause 23)

To implement a project, the Authority shall gazette it “within the space of a period of 2 months”. The Authority shall exhibit for public inspection a description of the general nature and effects of the project and a plan delineating the boundaries of the project. ‘Project’ means a development scheme or a development project.

Objections to Project to be Implemented by Way of Development Project (Clause 24)

Any person who considers that he/she will be affected by a project may send to the Authority a written statement of objections to the project. Objections will be considered by the Authority within three months of the expiration of the publication period before the whole case is passed to the Secretary for authorization. Any amendment to the project recommended will need to be gazetted for further comments.

Development Schemes (Clause 25)

No objection will be considered for a project to be implemented by way of a development scheme. The Authority may seek the endorsement of the Town Planning Board before the scheme is incorporated into existing outline zoning plans for gazetting and consultation purposes.

Appeal Board (Clauses 27 and 28)

The Appeal Board shall hear the appeal and a majority of the members hearing the appeal shall determine the question before it (27(17)). An aggrieved objector to a development project may appeal to the Appeal Board within 30 days after notification of the Secretary's decision.

Appendix VII Checklist of Risk management Measures undertaken by Developers (from Millington (2000))

Land assembly

- Securing options to site purchase or entering into conditional contracts for site purchase before obtaining Government approvals
- Using third parties to acquire sites gradually
- Using subsidiary companies to acquire sites gradually
- Creating and owning a land bank

Feasibility study

- Completing a scheme by stages to reduce risks of timing
- Undertaking detailed research on market demand for a particular type, size and location of property
- Ensuring good timing of product delivery by thorough and early market research and realistic projections of anticipated market conditions
- Building up a system to allow early detection of changes in market conditions
- Choosing locations that promise good returns
- Choosing sites with higher returns and less difficult site conditions
- Negotiating for flexible land use for redevelopment schemes
- Influencing planning policies and development plans to release land owned by your company for development
- Engaging in familiar types of property development at familiar locations

Financing

- Planning financial gearing so that if problems are encountered, financial viability is not destroyed
- Taking account of the risk position of the company with respect to the portfolio of schemes being on hand
- Setting a risk premium according to experience and judgement on a case by case basis

Construction

- Contracting-out construction work
- Choosing a competent and reliable builder
- Entering into fixed price contracts
- Allowing contingency sums and/or periods for cost over-runs, extended construction or marketing periods
- Taking out insurance for cost over-runs, extended construction or marketing periods

Marketing

- Securing pre-sales and/or pre-lets
- Forward funding the development

Others

- Improving partnerships with joint venture developers
- Creating land use mix and design that would be supported by the public

Appendix VIII Data Management and Analysis Design

The main aim of the data collection through the interviews/focus groups was to search for trends, relationships, themes and patterns. The method of managing the data and the analysis design will be explained in the following paragraphs.

It is important to manage and analyse the data or else those notes would ‘lack insight and significance’ and ‘be too long and too demanding for readers’ (Blaxter, 1996, p. 183). Managing data is to reduce ‘its size and scope’ so as to facilitate reporting them. Analysing the managed set of data is to abstract on it and draw attention to those important aspects. (Blaxter, 1996, p. 183)

The Focus Group and Interviews prior to Conjoint Analysis

The focus group and interviews were done soon after the questionnaire was completed, and pilot interviews were done before the conjoint analysis. The following will detail the data analysis and management of each method.

Data Management

Four one-to-one interviews with different individuals and a focus group were conducted. Three of the interviews were done in the participants’ offices while one interview and the focus group was conducted over lunch in a restaurant. The results were recorded on interview forms. A sample is provided in **Appendix IX**. A report was written in relation to the results obtained and the results were grouped according to different themes.

The participants gave practical and up to date information about current risks in development in Hong Kong, the risk pricing methods and the risk management measures currently practised by developers. The questions raised were directed at the main risks in redevelopment, the developers’ pricing and management of risk, the issue of market failure, the URA’s role and competition from China, with particular reference to current practice in Hong Kong.

The responses collected were mostly related to the Government’s control, as well as objections from the public and green groups to developers’ proposals which created much risk. The major concern was related to the planning process, through which, after the enactment of the amended Town Planning Ordinance in 2005, the public was allowed to

participate in the planning applications consultation in addition to the plan-making process, as in the past. This created more risk for the developers' schemes.

The researcher took notes during the interviews and group discussion. An instant record of the key points of each interview was made. No tape recording was made. Since the focus group provided only the signpost for developing the conjoint interview, it was considered that there was no need to sort, categorise or analyse the data collected.

Although it is slightly distracting having to take notes and listen to comments at the same time, the researcher had no great problem in focusing because the topic was familiar to the researcher and thorough preparation had been undertaken in order to remember the questions to be asked and their sequence. The decision not to tape record the sessions was taken to provide a comfortable and safe environment for respondents to give genuine answers. The drawback, though, is that the researcher cannot provide a verbatim record.

Data Analysis

After the information was collected from the focus group and interviews, thoughts, ideas and comments from the respondents were transcribed, recorded and organised properly in a standard form. The results recorded in the forms were later categorised and summarised into themes to produce a working paper. In the analysis of the information collected, care was taken to reduce bias and to ensure that equal consideration was given to the input from all the participants on all the aspects covered.

Uses, Advantages and Disadvantages of Focus Groups
<p>Uses</p> <p>Focus groups can help dig deep down and allow the researcher to understand developers and their behaviour; identify problems and establish their needs, evaluate existing or proposed risk management measures, and generate new measures that could possibly reduce or help manage risk.</p> <p><u>Advantages of Focus Groups:</u></p> <p>Focus Group is a kind of collective interview in a group rather than on an one-on-one basis and researchers interact with participants. 'Interactive and synergetic nature of group discussions allows deeper insights into how and why people think and behave the way they do' (Langford, J and McDonagh, D (2003) p. 1).</p>

Because they are interactive, the synergistic effect of group discussions allows the researcher and respondents to clarify with each other the concept or views put forth through follow-up questions, reading the facial expressions, gestures and other non-verbal cues. Participants may share similar views and therefore feel secure and comfortable to give deeper and more honest responses thereby allowing deeper discovery of information that may be hidden in one-to-one interviews. The researcher, as the moderator, can also motivate respondents to give more information and participate better. In this way, more information can be obtained in a shorter time in a focus group than in a survey or interviews.

A focus group is a qualitative research tool. It is better at handling information that cannot be measured or quantified. To tell initially why developers behave the way they do, a focus group is a good approach. It gives early feedback regarding new concepts and explores respondents' attitudes and therefore allows improvement to existing concepts.

During the discussion in a focus group, the discussion may stray from the intended direction and therefore open up new issues. It provides in-depth understanding of respondents' views and comments on an issue or topic. It is best for topics not well researched on because discussions among knowledgeable group members will provide large amount of useful data.

Drawbacks

There are limitations to focus groups. Discussion may veer away from the main aim of the researcher to what the respondents feel is interesting or comfortable to discuss, defeating the purpose. Dominant group members may take control of the discussion and hijack the topic to be discussed. Some group members just do not gel and will provide too little information despite the moderator's efforts to motivate them. It may also be difficult to recruit the appropriate members.

The researcher as moderator should assume the key role. Before the focus group, the researcher/moderator should realise the importance of being knowledgeable in the area under discussion and be able to change course or bring the group back to the main theme. As such, the researcher should be familiar with the literature relevant to the topic. The researcher should try to avoid being biased and not to steer members to accept his/her views. During the course of the discussion, the researcher/moderator should be minimally intrusive and let the discussion flow naturally but steered towards what has been outlined in the focus group guide.

Focus groups cannot totally reflect real-life scenarios. Respondents may give 'what should' answers rather than 'what they will do' in reality. Such groups produce large amount non-standardised qualitative data that require substantial resource input in preparation and processing, and may make analysis relatively more difficult.

Own Analysis – based on Hutton (1996) and Blaxter (2008)

Appendix IX Focus Group/Interview Guide and Sample of interview forms

Focus Group/Interview Guide

Risks– General

1. For the moment, can you imagine that I have a very limited background in development appraisal. Can you identify 4 or 5 factors that are probably the most important determinants of development profit?
2. It is often said that a strong relationship exists between risks and reward. Does this really apply in the property development industry? Do you think developers involved in redevelopment projects in Hong Kong are adequately rewarded?
3. The general public does not always consider developers to have earned these profits. Why do you think the public has these perceptions?
4. There are risk-averse and risk-loving developers. What are the factors that made them different?
5. Some say the main factors determining their developers' positions towards risks include the character of the developer and the way they perceive and respond to the opportunities and constraints. Do you think this is an adequate description?
6. What would be the best way to deal with the risks resulting from the recent environmental groups' objections to developers' practices? Examples are the creation of wall-type buildings in harbour-front area blocking views and adversely affecting air ventilation.
7. Do you consider the risks from lack of information in the China property market to be less or more significant than the risks instigated by the green groups in Hong Kong?
8. Should the Hong Kong Government do anything to reduce the risks of developers in this regard?
9. Do you think that wider public participation in the planning system will increase risks to developers?
10. To what extent is there a sense of change leading to wider participation in the planning process?
11. If wider participation does increase risks, should the Government do anything to help the industry reduce risks?
12. The demography in Hong Kong is changing. Is this something you are aware of and

how has your business changed as a result?

Market Failure

13. Some people see redevelopment as the result of market failure and think that reducing high transaction costs would be better than direct Government intervention. What are your views on this?

Interviewer note: If people struggle to answer then mention that government intervention is defined as tax breaks or subsidies.

URA

14. Is it the case that working for a public sector client greatly reduces the risks associated with a development project?
15. How effective, and in what ways, is the URA?
16. Is the URA effective in land assembly or do you prefer to assemble sites yourself?
17. Do you have any other views on URA's role in redevelopment in Hong Kong?

Risks Management Measures

18. Do you think the Hong Kong Government has been proactive in providing better and timely data/information? In what aspects could the Government be doing better?
19. Do you agree that developers with a lot of resources and better knowledge are in a better position to lobby the Government?
20. Do you think that lobbying provides developers with a shield against risks?
21. In what ways could Government help developers to understand the market better?
22. If the Government were to build up richer networks for developers, which kind of connection and which actors would be most important?
23. Is the legal framework relating to property rights, land and property development and property investment sufficiently robust? In what ways could they be improved?
24. There are arguments for and against the land application system in Hong Kong. What are your views? From your experience, how would the land assembly process be improved to reduce risks?

Risks Pricing

25. Development returns are often thought to be harder to predict than costs. Do you

agree with this and, if so, why do you think this is the case?

26. Which information problem causes the most significant problems from a development appraisal point of view – lack of comparable evidence or predicting the influence of macroeconomic factors?
27. How do you make sure the data and information used in the development appraisals are accurate and up to date?
28. To what extent is the true sensitivity of development variables taken into account in development appraisals? Do you think that development appraisals over, under or correctly represent risk due to market changes?
29. Do you think the general mis-calculation of risks in the early 1990s in many European and U.S. property markets could be repeated either in those economies or here in Hong Kong?
30. If the general feeling of the group is “no” then ask why not – what has the market learned; in what ways has the industry changed?
31. If the general feeling of the group is “yes” then repeat question 27 and not any differences in response.
32. Do you undertake sensitivity analysis, scenario testing or Monte Carlo Simulation as part of your development appraisal process?
33. What are your views about how useful these methods are?
34. Some developers think it is difficult to reflect the true risks in the appraisal of redevelopment projects because of thin transaction evidence in regeneration areas. To what extent do you think this is true?

Name of Interviewer : Rowena Lee

Name of Interviewee :

Date and Place of Interview :

Relevant background information on the interviewee :

No. of tapes for this interview : Nil

Tape index no.	Questions	Answers

Evaluation of Interview :

- interview to understand the risks of redevelopment, issue of market failure, URA's performance, risks management measures, risks pricing methods.

Summary of Interview :

Risks - General

1. For the moment, can you imagine that I have a very limited background in development appraisal.
2. Can you identify 4 or 5 factors that are probably the most important determinants of development profit?
3. It is often said that a strong relationship exists between risks and reward. Does this really apply in the property development industry? Do you think developers involved in redevelopment projects in Hong Kong are adequately rewarded?
4. The general public does not always consider developers to have earned these profits. Why do you think the public has these perceptions?
5. There are risk-averse and risk-loving developers. What are the factors that made them different?
6. Some say the main factors determining their developers' positions towards risks include the character of the developer and the way they perceive and respond to the opportunities and constraints. Do you think this is an adequate description?

7. What would be the best way to deal with the risks resulting from the recent environmental groups' objections to developers' practices? Examples are the creation of wall-type buildings in harbour-front area blocking views and adversely affecting air ventilation.
8. Do you consider the risks from lack of information in the China property market to be less or more significant than the risks instigated by the green groups in Hong Kong?
9. Do you think that wider public participation in the planning system will increase risks to developers?
10. Should the Hong Kong Government do anything to reduce the risks of developers in this regard?
11. If wider participation does increase risks, should the Government do anything to help the industry reduce risks?
12. To what extent is there a sense of change leading to wider participation in the planning process?
13. The demography in Hong Kong is changing. Is this something you are aware of and how has your business changed as a result?

Market Failure

14. Some people see redevelopment as the result of market failure and think that reducing high transaction costs would be better than direct Government intervention. What are your views on this?

URA

15. Is it the case that working for a public sector client greatly reduces the risks associated with a development project?
16. How effective, and in what ways, is the URA?
17. Is the URA effective in land assembly or do you prefer to assemble sites yourself?
18. Do you have any other views on URA's role in redevelopment in Hong Kong?

Risks Management Measures

19. Do you think the Hong Kong Government has been proactive in providing better and timely data/information?
20. In what aspects could the Government be doing better?

21. Do you agree that developers with a lot of resources and better knowledge are in a better position to lobby the Government?
22. There are arguments for and against the land application system in Hong Kong. What are your views? From your experience, how would the land assembly process be improved to reduce risks?
23. In what ways could Government help developers to understand the market better?
24. If the Government were to build up richer networks for developers, which kind of connection and which actors would be most important?
25. Is the legal framework relating to property rights, land and property development and property investment sufficiently robust? In what ways could they be improved?

Risks Pricing

26. Development returns are often thought to be harder to predict than costs. Do you agree with this and, if so, why do you think this is the case?
27. Which information problem causes the most significant problems from a development appraisal point of view – lack of comparable evidence or predicting the influence of macroeconomic factors?
28. How do you make sure the data and information used in the development appraisals are accurate and up to date?
29. To what extent is the true sensitivity of development variables taken into account in development appraisals? Do you think that development appraisals over, under or correctly represent risk due to market changes?
30. Do you think the general mis-calculation of risks in the early 1990s in many European and U.S. property markets could be repeated either in those economies or here in Hong Kong?
31. Do you undertake sensitivity analysis, scenario testing or Monte Carlo Simulation as part of your development appraisal process? What are your views about how useful these methods are?
32. Some developers think it is difficult to reflect the true risks in the appraisal of redevelopment projects because of thin transaction evidence in regeneration areas. To what extent do you think this is true?

Appendix X – Samples of Conjoint Interview Screen shots

Thank you for participating in this study.

You will be faced with a series of screens in which there are several development project choices. On each screen, please choose which of the possible development projects is preferable.

If you do not wish to choose any of the given option, then please select the "none" option.

All the responses will be kept in the strictest confidentiality.

Task 08

If you were considering to make a redevelopment and these were the only alternatives, which package would you choose? Make your selection by clicking within the box with the mouse.

Macroeconomic Condition	Interest rates - high; Inflation - high; Recession likely	Interest rates - low; Inflation - low; Economic growth - high	I would not choose any of the given options.
Market Condition	Oversupply in all use class	Undersupply in all use class	
Lease	Restrictive Conditions in lease	Unrestricted lease	
Land Assembly	Unfamiliar location, URA undertakes compulsory purchase, land sold to highest bidder	Part of your company's land bank, up front acquisition	
Planning Status	Problematic to obtain planning permission	Full planning permission obtained	
Public Engagement (land use mix and development design)	Likely to cause some public protest	Supported by the general public	
Relationship with Stakeholders	With Government - Distant	With joint venture partner - Good	
URA Actions□	Required to share profits with URA	No land premium to the Government	
Profit (+ risks premium)	Around 10% of development value	Around 25% of development value	
Uncertainty over profit	75% chance profit less than expected	10% chance profit less than expected	

Task 08

If you were considering to make a redevelopment and these were the only alternatives, which package would you choose? Make your selection by clicking within the box with the mouse.

Macroeconomic Condition	Interest rates - high; Inflation - high; Economic growth - low	Interest rates - low; Inflation - low; Economic growth - high	I would not choose any of the given options.
Market Condition	Undersupply in all use class	Supply and demand in all use class are almost at equilibrium	
Lease	Restrictive Conditions in lease	Conditions in lease acceptable	
Land Assembly	Acquired gradually, through intermediaries	Options costing up to 10% of site value	
Planning Status	Full planning permission obtained	Planning permission will be obtained	
Public Engagement (land use mix and development design)	Supported by the general public	Likely to cause some public protest	
Relationship with Stakeholders	With joint venture partner - Problematic	With Government - Distant	
URA Actions□	URA negotiates flexible planning requirements	URA mediates between Government and you	
Profit (+ risks premium)	Around 20% of development value	Around 15% of development value	
Uncertainty over profit	50% chance profit less than expected	10% chance profit less than expected	

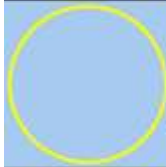
You have just finished the first half of the interview. The survey is not finished but I am asking some more general questions for a couple of minutes.

Quit Details Back Help 

Current Position



Director



Manager



Professional



Others

Quit Details Back Help 

Your Experience with Redevelopment

☐ 1 year or less

☒ 2-3 years

☐ 4-6 years

☐ 7-9 years

☐ 10 or more years

Any Experience in Working with URA

☒ Yes

☐ No

☐ Architect

☐ Engineer

☒ Planner

☐ Surveyor

☐ Others

Q4 Q5 Q6 Q7

The second half of the choice survey is now about to begin and you are going to be faced with choices.

Q4 Q5 Q6 Q7

Thank you for participating in this study.

You will be faced with a series of screens in which there are several development project choices. On each screen, please choose which of the possible development projects is preferable.

If you do not wish to choose any of the given option, then please select the "none" option.

All the responses will be kept in the strictest confidentiality.

Appendix XI - Meaning of the terms for Modelling Results in Section 8.3

- [codedans = 0]** - Coded Answers
- [macroeco=1]** - Interest rates Low, Inflation Low, Economic Growth High
- [macroeco=2]** - Interest rates and Inflation rising, Economic Growth Moderate
- [macroeco=3]** - Interest rates - high; Inflation - high; Economic growth – low
- [market_c=1]** - Undersupply in all use class
- [market_c=2]** - Oversupply in all use class
- [lease=1]** - Unrestricted lease
- [lease=2]** - Restrictive Conditions in lease
- [land_ass=1]** - Options costing up to 5% of site value
- [land_ass=2]** - Options costing up to 10% of site value
- [land_ass=3]** - Acquired gradually, through intermediaries
- [land_ass=4]** - Part of your company's land bank, up front acquisition
- [planning=1]** - Full planning permission obtained
- [planning=2]** - Your firm can influence planning process
- [planning=3]** - Planning Permission will be obtained
- [public_e=1]** - Likely to cause some public protest
- [public_e=2]** - Unadventurous but public protest unlikely
- [relation=1]** - With joint venture partner – Good
- [relation=2]** - With joint venture partner – Problematic
- [relation=3]** - With Government – Good
- [ura_acti=1]** - Required to share profits with URA
- [ura_acti=2]** - No Land Premium payable to the Government
- [ura_acti=3]** - URA negotiates flexible planning requirements
- [ura_acti=4]** - Works well with the public via URA
- [profit=1]** - Around 10% of development value
- [profit=2]** - Around 15% of development value
- [profit=3]** - Around 20% of development value
- [uncertai=1]** - 10% chance profit less than expected
- [uncertai=2]** - 50% chance profit less than expected