

Title	Empirical study of the correlation between mall traffic and mall's renovation
Other Contributor(s)	University of Hong Kong
Author(s)	Cheuk, Sui-hung; 卓瑞虹
Citation	
Issued Date	2010
URL	http://hdl.handle.net/10722/131044
Rights	Creative Commons: Attribution 3.0 Hong Kong License

THE UNIVERSITY OF HONG KONG

**EMPIRICAL STUDY OF THE CORRELATION BETWEEN
MALL TRAFFIC AND MALL'S RENOVATION**

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

DEPARTMENT OF REAL ESTATE AND CONSTRUCTION

BY

CHEUK SUI HUNG

HONG KONG

APRIL 2010

DECLARATION

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

Signed: _____

Name: Cheuk Sui Hung

Date: 8/4/2010

ACKNOWLEDGEMENTS

I would like to express my sincere and deep gratitude to Dr. Daniel C. W. Ho, my Faculty Supervisor, whose support, insight and incisive feedback have been invaluable in my completing this dissertation.

To Mr. T. M. Look, the Senior Project Officer and Ms. C. N. Chu, Assistant Project Manager, both from The Link Management Limited, for their helpful and resourceful information on retail renovation. To them, I extend my special thanks.

I would also like to thank my family, friends and classmates who have given me much encouragement and support. Their understanding has made a difference in my completing the dissertation.

ABSTRACT

Building renovation is not new in the construction industry. When the physical and the aesthetic condition of a building especially a shopping center, deteriorate to the extent that it loses its appeal to customers, some form of improvement such as renovation is necessary to maintain the value of the buildings and to retain if not attract, new customers.

Renovation of retail shopping centers is on the rise during the past decade. The New Town Plaza in Shatin, the Lung Cheung Mall in Wong Tai Sin and the Times Square in Causeway Bay are a few examples of recent retail mall renovation. 'Mall' and 'Shopping Center' are interchangeable used in the text of this dissertation.

The purpose of this paper is to study the how a shopping center's people flow correlates with its renovation.

All literature researched indicated that a renovated center, with its enhanced look-and-feel, its added tenant mix, improved facilities, does bring additional customers to the mall which in turn would benefit the retailers and the owners in terms of income. However, there is no study conducted on the correlation between mall traffic and the mall's renovation.

This research serves to evaluate the relationship. The hypothesis that renovation of a shopping center has a positive effect on the mall traffic is

established. The paired t-test statistical analysis method is used with real-life data collected from the mall owners on 27 malls on the people flow in the mall before and after their renovation, to validate the hypothesis.

The test confirmed that a renovated mall does have a positive impact on the mall traffic.

Due to resource and time constraints, there exist limitations in the study and they are qualified in the paper.

The paper starts off with a description on the different classes of shopping centers and the critical success factors for a shopping center, to bring the reader to understand the rationale for renovation. It then discusses the benefits and the difficulties in a mall renovation.

The definition of renovation used in the context of this paper is clarified to ensure level understanding.

The author believes that there would indeed be increased people traffic once a mall is renovated to meet the current trend and consumers' needs and preference. With renovation, a mall's value is also enhanced, so is its image. A renovated mall will have a competitive edge over the many others across Hong Kong.

On the other hand, if a mall is not renovated to meet current demands and

needs, the increase in mall traffic may not be true. The success to retain the improved mall traffic is another issue. To ensure the mall traffic is increased and can be sustained, the author offers some suggestions to mall owners to involve stakeholders (consumers, existing tenants and prosperous tenants) upfront in the renovation's strategic planning stage by seeking their input on needs, preferences and requirements. The author has other suggestions to offer on mall promotions. The details of the author's suggestions are documented at the end of this research paper.

Other studies that warrant further studies are also identified at the end of the paper.

TABLE OF CONTENTS

DECLARATION	i
ACKNOWLEDGEMENTS	ii
ABSTRACT	iii
TABLE OF CONTENTS	vi
LIST OF ILLUSTRATIONS	xi
CHAPTER 1 INTRODUCTION	1
1.1 Background	1
1.1.1 Obsolescence of shopping centers	2
1.1.2 Renovation of shopping centers	3
1.2 Significance of the study	5
1.3 Aim & Objectives	7
1.4 Expected outcome and contribution	7
1.5 Organization of the study	8
CHAPTER 2 LITERATURE REVIEW	10
2.1 What is a shopping center?	10
2.2 Characteristics of enclosed shopping center	11
2.3 Classification of shopping center	14
2.3.1 Neighborhood center	14
2.3.2 Community center	15
2.3.3 Regional center	16
2.3.4 Super-regional center	16
2.3.5 Specialty center	17
2.4 Factors determining the success of a shopping center	18
2.4.1 Location	18

2.4.1.1	Public transportation	19
2.4.1.2	Private car	19
2.4.1.3	Pedestrian route connected to shopping center	20
2.4.2	Tenant mix	20
2.4.3	Management	21
2.4.4	Internal design and environment	23
2.5	Reason for the loss of shopping center attraction	24
2.6	General aspects of renovation	26
2.6.1	Definition of Renovation	26
2.6.2	Major changes in the renovation projects	28
2.6.2.1	Improved physical condition of the mall	29
2.6.2.2	Greater variety of tenants	30
2.6.2.3	High quality of customer service and security	30
2.6.3	Benefits of Renovation	31
2.6.3.1	Improve physical appearance of shopping center	31
2.6.3.2	Enhance tenant mix	31
2.6.3.3	Develop a unique shopping center	32
2.6.3.4	Increase rental income	33
2.7	Difficulties for Renovation	34
2.7.1	Restricted construction working hours	34
2.7.2	Tenants' objection	34
2.7.3	Long Lease tenants	35

2.7.4	Higher operational costs	35
2.8	Impacts of renovation on tenants and building owners	36
2.8.1	Impacts of renovation on tenants	36
2.8.2	Impacts of renovation on building owners	36
CHAPTER 3	HYPOTHESIS AND METHODOLOGY	38
3.1	Hypothesis	38
3.2	Methodology	39
3.2.1	Method comparison -Sample collection	39
3.2.1.1	Interview with tenants	39
3.2.1.2	Collect data from the building owner/ developer	40
3.3	Method of Analysis	41
3.3.1	Testing a statistical hypothesis	43
3.4	Research framework and variable selection	46
CHAPTER 4	DATA ANALYSIS AND DISCUSSION	48
4.1	Background information of the sample collected	48
4.2	Empirical test	50
4.2.1	Evaluation of hypothesis	52
4.3	Implication of the result	54
4.3.1	Benefits to tenants	54
4.3.2	Benefits to the owners of shopping centers	56
4.3.3	Benefits to investors	56
4.4	Suggestions to the owners of shopping centers	57
4.4.1	Choice of center	57
4.4.2	Collect consumers' opinion before undergoing renovation	58

4.4.3	Collect tenants' opinions before undergoing renovation	60
4.4.4	Promotion	61
CHAPTER 5 CONCLUSION		63
5.1	Review of Research	63
5.2	Implication of research	65
5.3	Limitation of the study	67
5.4	Area for further studies	67
5.4.1	Benefits of renovation	68
5.4.2	Decision on renovation	68
5.4.3	Impacts of renovation on residential price	68
5.4.4	Consumers and retailers' perspective on renovation of shopping centers	69
REFERENCES		70
APPENDICES		78
Appendix A : Hong Kong Shopping Mall aged over 20 years		78
Appendix B : Renovation project - Fu Tung Plaza		82
Appendix C : Renovation project - Lung Cheung Mall		85
Appendix D : Renovation project - Hau Tak Shopping Center		88
Appendix E : Renovated shopping center - New Town Plaza		91
Appendix F : Renovated shopping center - Tai Po Mega Mall		93
Appendix G : Renovated shopping center - Landmark North		95
Appendix H : Renovated shopping center - Tsuen Wan Plaza		98
Appendix I : Renovated shopping center - Windsor House		100
Appendix J : Renovated shopping center - Kingswood Ginza		102
Appendix K : Location Map of 27 shopping centers		103

Appendix L : Background information of the samples	104
Appendix M : News: Renovation of Wong Tai Sin Shopping Center	105
Appendix N : Formal Letter requesting data on mall traffic	106
Appendix O : Interview Questions with Project Managers	107

LIST OF ILLUSTRATIONS

Figures

Figure 1:	Population in Hong Kong	13
Figure 2:	Distribution of collected sample (shopping centers)	49
Figure 3:	Age of shopping centers	50
Figure 4:	Result of t-test	53
Figure 5:	Research conclusion	66

Tables

Table 1:	T-distribution table	44
Table 2:	The research framework and variable selection	46
Table 3:	Analysis of people flow in each shopping center	51

CHAPTER 1 INTRODUCTION

1.1 Background

Hong Kong is renowned worldwide as a “Shoppers’ Paradise”. Shopping malls in Hong Kong range from the glitzy to the funky, attracting millions and millions of visitors from all over the world. Stylish and trendy malls with a variety of department stores and a profusion of retailers, world-famous labels and trendy boutiques, like the International Financial Center, the Maritime Square, the Pacific Place, the Elements, the Harbour City, the Peak Galleria, the Citygate Outlet, to name a few, are bustling with visitors, be they local or otherwise. The malls, not only enable people to buy what they need, they are also enriching destinations for visitors. That is why shopping malls, or centers, are packed with people especially on the weekends.

A plethora of shopping malls in Hong Kong, the exquisite premier ones in particular, is a magnet for tourists, whose spending and shopping help to boost the economy of Hong Kong. The centers also serve as a pastime place for the citizens and have significant social value to society. Hence, shopping centers play a vital economical and social role in Hong Kong.

Shopping centers are all around Hong Kong. They are owned by different developers and The Link Management Limited (The Link) which was the Hong Kong Housing Authority prior to 2005. The Link has a relatively large market share in shopping malls. Since the company is set up in 2005, it has

renovated a number of their shopping centers to enhance their value to retailers, to the shoppers and to its own shareholders.

1.1.1 Obsolescence of shopping centers

Given that market conditions remain unchanged, the net rental income derived from a mall can be expected to decrease over time for obvious reasons. The original design would become increasingly outdated and unsuited to new activities (Wong, 1993). A shopping center becomes less attractive to consumers with its outdated design, wear and tear and obsolete facilities. Tenants might move out when the people flow in the center drops especially when they are confident that their key customers would move with them. Some tenants might use this situation as an opportunity to bargain for a lower rent. The vacancy rate might increase. Consumers might not prefer to shop in a run-down or outdated center unless there is a valid reason for patronizing the center e.g. for convenience, for price of goods. The consumers might on the most part, prefer to go somewhere where their shopping would be a more pleasant and enjoyable experience. Alternatively, they might go shopping online on the Internet. With tenants vacating, vacancy rates rising and visitors' flow decreasing, the value of the center would drop, so would that of the property. As a result, the net rental income would decrease and this is something none of the center owners and other key stakeholders of the center would like to face. Retention of tenants and mall visitors is a key success factor for shopping centers' survival.

To keep the shopping centers current to cope with the market demands, building maintenance is carried out on a regular basis. The purpose of the maintenance is to keep the building functionally effective, such as retrofitting or maintaining existing facilities to comply with the latest building Code or requirements. Center owners are cognizant that people are often after fresh look-and-feel. That's why every so often, they renew and enhance the centers' look and feel as well as facilities in order to retain, if not to attract, more customers or visitors to the centers.

1.1.2 *Renovation of shopping centers*

Renovation of shopping center is common in the retail industry. The older shopping centers often have to undergo substantial refurbishments in order to keep up with the latest trends in retailing and the retailers' needs; and to stay competitive with other modern shopping centers in appeal and amenities (Wee & Lynda, 2005). For example, the Pacific Place in Hong Kong, which is 15 years old, has taken on a series of hardware and software provision to enhance its building. Graphics along the driveway were implemented and signages were added. The sanitary facilities were upgraded to meet higher hygiene standards (Wong, 2004). Another example is the Grand Century Place in Mongkok. Its atrium at the ground level and its food court at the fifth level have undergone renovation. The atrium has spotted a more clean-cut design and the food court a better seating capacity. It is believed that the renovation of these two shopping centers was for reasons of

competitiveness, value-add other than for improvements in safety measures and to accommodate a greater mix of tenants.

Old buildings have an added problem of being obsolete in their safety measures. Their fire and other barrier-free-access facilities may not comply with the current enacted standards. Some buildings do not have management. Even if they have, their building management might not have enforced the compliance of the safety rules. When a fire breaks out, disaster would strike. Take the case of the fire outbreak in Cornwall Court in August 2008, two firemen died in the accident. According to the post-accident investigation report, the death was due to the rescue door on the roof under lock. Building maintenance was not carried out in the building resulting in its deteriorated condition. The occupants might also have been indifferent to caring for an old building. But more importantly, there was a lack of management in the building.

In Hong Kong, as shown in Appendix A, many shopping centers are over 20 years. As centers get older, even well-maintained ones need updating. A tired-looking center is prone to sales decline and invites competition (CILIA, 2000). Hence, many shopping centers have undergone renovation or refurbishment, ranging from small to very large scale, in order to improve the amenities and give the centers a facelift.

Renovation and tenant mix are often discussed together. A renovated shopping center may attract new tenants because of the improved quality and

facilities of the building. These new tenants may be magnet tenants which attract large volume of visitors to the center; and benefit other tenants as well. On the other hand, a renovated center may demand a higher rent. This rental increase might result in a loss of existing tenants who could not afford the incremental rent. Therefore, any renovation project should be carefully planned. Experienced planning and management are necessary to ensure that the existing tenants especially the anchor ones, are maintained and the image of the developer is not adversely affected.

1.2 Significance of the study

It is always assumed that retailers and the center owner could benefit from renovation. A fresh and modernized environment and look would attract more shoppers, increase the people flow, attract more tenants, lower the vacancy rate and hence improve the rental income. The benefits can be summed up as two major ones. They are to *increase rental income* and to *increase the mall traffic*. Both of these are key concerns of the stakeholders of the mall: the center owner, the shareholders of the owner company and the retail tenants. The higher the people flow, the greater are the opportunities for sales. More sales mean more income and hopefully more profit for the retail tenants. No tenants would like to be in a mall where the volume of visitors is insignificant. Mall traffic or the people flow in the mall, is therefore, a key concern of the retail tenants. For the owner of the mall, more tenants, a low or no vacancy rate translate to a higher net rental income. For

owners and retailers whose primary interest is to maximize their profits, it is therefore not surprised that their focus is on boosting the people traffic in the shopping malls.

Tenants are one of the key interests for mall owners as they generate incomes for center owners. Therefore, it is worthwhile for the owner to understand the concern of the retail tenants. As discussed, the tenants are mostly concerned on the people flow. If a renovation project results in an increased people flow, they are less likely to object. Otherwise, a decrease in flow after renovation would no doubt turn away some tenants.

Tenants are concerned about interruptions to their business and daily operation. Renovation in a center where they are located would certainly unavoidably bring disturbance to these tenants: dust and dirt floating into their shop, heating or air-conditioning got shut down occasionally, signage and construction around them, customers' access to their shops hindered (Hearn, Lawrence, 1995). Therefore, it is vital to convince the tenants that the renovation would bring about an increase in people flow to garner the retailers' support for the renovation and make the renovation a win-win initiative for all parties.

1.3 Aim & Objectives

The aim of the study is to find out the effects of renovating shopping centers.

There are five objectives to the study:

- i. To study the critical success factors for shopping centers
- ii. To investigate the need for renovation in shopping centers
- iii. To examine the impacts of renovating shopping centers, positive or adverse, to all stakeholders: the consumers, the retail tenants, the center owner and the shareholders of the company that owns the mall
- iv. To examine the correlation between mall traffic and the renovation of the mall
- v. To recommend further studies based on the findings

1.4 Expected outcome and contribution

The expected outcome of this research is to confirm that renovated shopping centers do indeed boost the mall traffic and hence enhance the value of the center/property and generate more income for the retail tenants and the mall owner.

Through this study and through more working experience and knowledge exchange with management professionals, the author aims to contribute to the society by introducing more renovation best practices especially to the shopping malls to ensure Hong Kong stay competitive as its status evolves with the rise of more competing cities in China and in Asia.

1.5 Organization of the study

This dissertation is comprised of five chapters.

Chapter 1 is the introduction of the dissertation. It starts with the background information followed by the objectives of the research and structure of this dissertation. The ideology of the research is described in this chapter.

Chapter 2 is the literature review. It provides a review of literature about shopping centers. The definition and classification of shopping center as well as the importance of renovation of retail property are presented. The benefits of retail renovation and its impact on retailers and building owners are included in this chapter.

Chapter 3 is hypothesis development and methodology. It gives detailed procedures on how the research was carried out. It begins by presenting the hypothesis of this dissertation. Then, the methodology adopted in this study to evaluate the hypothesis is discussed. The method of data collection and

data analysis are presented in the last part of this chapter.

Chapter 4 is the data analysis and discussion. Statistical data collected for the evaluation of hypothesis are presented. The implications of the results are discussed. This is followed by the suggestions to the owners of the shopping malls in carrying out renovation.

Chapter 5 is the conclusion. It summarizes the analysis and concludes the findings. It also presents the limitation of the research and suggests some areas for further studies.

CHAPTER 2 LITERATURE REVIEW

2.1 *What is a shopping center?*

“Shopping centers mean a group of commercial establishments which have been designed, planned, developed, owned, marketed and managed as a unit.”

(John & Dennis, 1985)

A shopping center means “A group of shops with a common area for cars to park, which usually provides goods and services for local people.”

Cambridge Advanced Learner Dictionary.

A planned retail development is comprised of at least three shops. It is under one freehold ownership and managed and marketed as a unit.

(Clifford, 1994)

A shopping center is defined as a group of retail and other commercial establishments that is planned, developed, owned, and managed as a single property.

International Council of Shopping Centers, www.icsc.org

The above definitions give a general idea of what a shopping center is. In Hong Kong, the centers are in an enclosed area with shops of different nature, providing people with goods and/or services to meet their daily needs. Each center is managed as a unit. In other words, a shopping center is a planned area with design, promotion, security and maintenance, for tenants

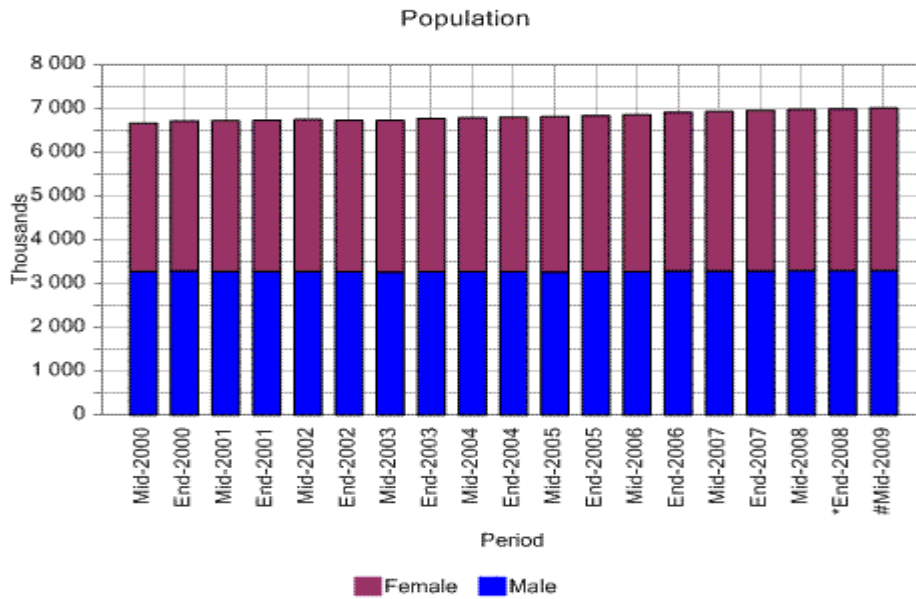
and customers to conduct their trade. The type of retailing and the operation of the center are managed and administered either directly or indirectly by the owner or by companies it hires.

2.2 Characteristics of enclosed shopping center

An enclosed shopping center provides a traffic free and weather-proof environment with a concentration of shops for the convenience and safety of shoppers. A planned shopping center is one with “anchor units” (anchor tenants) in mind amidst the variety and mix of shops that are to operate in the center (Walker & Morgan, 1988). This planned concept can easily be seen in the malls around Hong Kong. There are some key tenants like department stores, brand-label shops, supermarkets or chain stores, in addition to boutique shops of different mix in a center. For some shopping centers, there are also cinemas, food courts, entertainment and other facilities to satisfy all the needs of a customer under one roof, that is make their customers’ visit a ‘total’ experience. A study conducted by America’s Research Group found that 70% of shoppers who had experienced entertainment in a retail store or shopping center would return for another visit, and within that same group three in ten shopped at an average of 4.5 stores during that visit. Entertainment shops not only attract to customers themselves, but to other entertainment shops of a different nature in the same mall too. The presence of the entertainment facilities and eateries would increase the time consumers spend in the mall and likely generate more returning customers. Most shopping centers provide car parking facilities.

In the recently-completed Maritime Mall, there are a host of facilities besides parking and those for handicaps and babies. It has facilities for business people such as mail service, photocopying service, stamps service, fax service, baggage and locker service; as well as other convenient services for all visitors such as mobile phone battery charging, mail service, Octopus re-charge, rain cost hire, sewing kit hire, umbrella service, lost and found service and first-aid service. Shops, facilities and amenities, whether limited or extensive, customer service and a temperature and security controlled environment are essentials in a typical shopping center in Hong Kong.

The concept of shopping center is by no means new. A city or country started to trade in outdoor marketplace in the past. These then evolved into integrated indoor retail centers. Beddington (1991) stated that “whenever community has grown up, ‘shops’ or market would develop and over a period of time ‘shopping centers’ are born and they would become the focus of every town and village.” In Hong Kong, ‘street shops’ were very common in the days before the 80’s. To keep pace with the development around the world and to meet the evolving demands of its growing population (Figure 1), shopping centers come into existence in Hong Kong. A great number of street shops are relocated to the centers, or replaced by mega shops in enclosed shopping malls. Shopping centers and street markets alike, are tourist attractions.



* Revised figures.
Provisional figures.

Figure 1: Population in Hong Kong

Source: Census and Statistics Department (2009)

An integrated indoor environment benefits the mall owners, the tenants and the shoppers/visitors. Shopping centers provide goods and services that meet the daily needs of their customers and satisfy their shopping needs (Hui, 2006). They provide convenience to shoppers who could obtain their needs under one roof. An appealing environment would draw customers from other districts, thus generating more potential sales and income to the retail tenants. The owners benefit from a rise in rental income as a percentage of the increased sales, in addition to the regular rent. Shopping centers do indeed are financially beneficial to society.

2.3 Classification of shopping center

Black (1989) identified five types of shopping centers. They are neighbourhood centers, community centers, regional centers, super-regional centers and specialty centers. The centers differ in size, tenant mix, driving radius (or commuting time in Hong Kong), numbers of retail stores and types of business. Shopping centers may look similar in size, layout and in goods and services provided. However, each may be catering to a different segment of shoppers. In other words, one shopping center may not always compete with another, depending on their locale and the grade of the goods and services provided.

The characteristics of the different types of shopping centers are described below.

2.3.1 Neighbourhood center

As the name implies, a neighbourhood center is built in the neighbourhood of residential areas. It provides convenience goods such as magazines, food, clothes and goods which are frequently purchased by residents in the neighbourhood to meet their daily needs. The location can either be in an urban or a suburban area. Customers live within short radius of five minutes or less driving time, or in Hong Kong, within walking distance or within reach in ten minutes or less of commuting time by public

transportation. The number of tenants is not extensive in the neighborhood center and a supermarket is usually the anchor unit of the center. In Hong Kong, the neighborhood centers include tenants which provide daily necessities to customers. Sometimes, these centers offer community services such as pre-school education, interest classes for primary students and tutorial class. As the centers are supported by the pool of local residents, the retail tenants enjoy a stable income although they cannot expect a rise of people traffic. The Chi Fu Mall in the Chi Fu estate in Pokfulam is an example of a neighbourhood shopping center.

2.3.2 Community center

Community centers also provide goods and services to shoppers. Their anchor tenants include both supermarkets and chain stores. Other small tenants are also present in the centers. The center draws customers from a 10 to 15 minutes driving radius. In Hong Kong, the author would equate this to approximately thirty minutes of commuting time by public transportation for those who live away from the center. Since Hong Kong is so packed, for many people, the community center is also a neighbourhood center. Very often, consumers come here to do price comparison if not to buy. Therefore, these centers do have to have enough tenants for consumers to do price comparison be they on price, quality, credit programs available, credit costs, color, brand and expected performance (Hui, 2007). Similar to the neighbourhood centers, community centers are close to large residential

estates (Black, 1989 & Sher, 1996). The Times Square in Causeway Bay is an example of a neighbourhood and community center combo.

2.3.3 *Regional center*

Outside Hong Kong, most regional centers are developed and controlled by a single developer (Black, 1989). The scale of a regional center is larger than that of a neighborhood center or a community center. It attracts customers from a 15 to 20 minutes driving radius. It offers a broader range of goods and services to customers. There may be entertainment facilities and eateries to cater to customers' leisure demand. The provision of car parking is a must in order to serve the potential customers who come here by car. The center is usually located in an area with high accessibility and convenient transport. New Town Plaza in Shatin and Tai Koo Plaza in Quarry Bay are good examples of a regional center.

2.3.4 *Super-regional center*

A super regional center is a regional center on a larger scale. It provides a wider range of goods and services, cinemas, restaurants offering different cuisines, business services and more convenient services to customers. Brand name chain stores would be the major tenants of the center. The super regional centers sell or provide goods and service that can be classified into

the primary and the tertiary or secondary tier. Those in the primary tier are used to attract customers from a radius of 30-45 minutes' driving time (or commuting time in Hong Kong); whilst those in the secondary or tertiary tier are used to pull customers from an even greater driving distance (Black, 1989 & Sher, 1996). The centers attract customers from a wider radius. They are usually located in central areas like the business districts of a city. The IFC in Central, the Maritime Mall, the Elements above Kowloon Station and the Ocean Terminal in Tsim Sha Tsui are examples of super-regional centers in Hong Kong.

2.3.5 Specialty center

The specialty centers have retail tenants that sell goods and services of the like. They do not have a specific prominent key tenant. Their tenants also price their goods and services at full market prices (Thomas, 1989 & Sher, 1996). In Hong Kong where some shopping centers are 'vertical' (that is, housed on different floors of a building), specialty centers with a conglomerate of shops that sell like goods or services, exist on consecutive floors of buildings. Examples would be the Travel specialty centers that exist in Hang Lung Center and Bank Center in Mongkok and in East Point Center in Causeway Bay.

2.4 Factors determining the success of a shopping center

2.4.1 Location

According to John & Kevin (1996), locale is the prime factor for the success of a shopping center. It must be easily and conveniently accessible by people. Location, in turn, is governed by two other factors: i) competition from the existing nearby retailers, and ii) accessibility.

i) Competition from the existing nearby retailers

Locating too close to a shopping center or a conglomerate of shops offering similar goods or services may invite competition and reduce the people traffic to the mall. Knowing the competition from nearby retailers is essential. The exception are the Specialty Centers which have shops of like business grouped together to facilitate consumer shopping.

ii) Accessibility

Easy access is vital to the shopping center since it can draw more customers to the center and hence more sales are expected (National Economic Development, 1971). Access to a shopping center can be by public transportation, private cars or on foot. Each of these means has to be considered and they are discussed below.

2.4.1.1 *Public transportation*

Hong Kong has a well-developed and an extensive transportation network with many forms of transportation including bus, light bus, taxi, tram, ferry, Mass Transit Railway (MTRC) and Kowloon-Canton Railway (KCRC) offering much convenience to the public. It would be an advantage to a shopping center if it is located near one of these commuting stations. New Town Plaza in Shatin links with different forms of transportation. It is connected to Shatin KCRC station and there is a bus terminal at the ground level of the center. Light buses are also in its vicinity. It is an example of an easily-accessible shopping center.

2.4.1.2 *Private car*

Although there is an excellent transportation system in Hong Kong, there is still a significant number of families who own private cars. In 2008, there were 383,000 licensed private cars in Hong Kong (Census and Statistic Department 2008). Hence, the provision of car parking is necessary in shopping centers to meet the demands of those who travel by private cars. The location of the car park should be easy to access. Otherwise, it provides inconvenience to users. There should also be adequate parking space and signages and preferably, a pay-by-Octopus service.

In Hong Kong, it is common to offer free or discounted parking to consumers whose purchase is over a threshold amount. This makes shopping in these centers more attractive to those with private cars. As a result, more sales could be generated for the center.

2.4.1.3 *Pedestrian route connected to shopping center*

The accessibility of a shopping center would be higher if there is footbridge connecting it to the nearby residential buildings. If a center is in a location where the visibility is very low, a well-connected footbridge would circumvent the situation.

2.4.2 *Tenant mix*

“If the tenants are selected properly and their balance is appropriate, the combination of the many individual tenants that form the shopping center allows each tenant to be more successful than if it were outside the center...the whole is greater than its parts” (ULI, Washington D. C., 1984). A right tenant mix would benefit the tenants because it may attract more shoppers. Therefore, the size of shops, the total numbers of shops and the type of shops should be carefully considered and determined during the planning stage of a shopping mall. The anchor tenant or tenants which serve as the primary attraction to the mall, has to be carefully decided upon. In

neighbourhood centers or community centers, a supermarket or a chain store may be the ideal anchor tenant. In regional centers, leisure facilities such as cinema and ice-skating rinks may serve as the anchor units as they bring a certain volume of customers to the centers regularly. The customers may not do shopping after using the leisure facilities, but they may return to the shops that appeal to them at another time. Sometimes, they may spend time in shops while waiting for the facility to open or for their relatives while the latter use the leisure facility. As a result, the other shops benefit from those leisure facilities.

2.4.3 Management

Management is another key factor to the success of a shopping mall from its inception, through the design and construction stage to the daily operation of the center. Whilst the principals of management are the same for shopping centers and residential buildings, some aspects of management for these two types of entities do differ. Shopping centers require higher attention to be paid on their facilities and the physical appearance than residential buildings. The volume of people moving through a shopping center is higher than that through a residential unit. The visitors to a shopping center are more particular about the look-and-feel of the place and as 'customers', their expectation on the completeness, the cleanliness of the facilities and the mall itself is also greater. Whereas for residential units, residents are more tolerable of the deteriorating conditions of the building as any fixes, especially

major ones would require them to take out extra money.

In Hong Kong, management of a shopping center is usually handled by a management company. A limited budget would limit the choice of the management companies. Sometimes, the owner may choose price over quality and performance and go with a company with the lowest bid. This may result in poor management of the shopping center. Hence, "the most satisfactory method, by consensus view and as demonstrated by results, is for the developer to have a continuing interest in the center and to be responsible for management." (Beddington, 1991) In Hong Kong, some large developers or owners of shopping centers hire their own subsidiary firms to manage their malls for this same reason.

The reason for employing a management team is to maintain a shopping center in good condition and with high quality to ensure the tenants and shoppers are happy with the environment. Managing a shopping center includes the routine wear and tear maintenance, cleaning, customer care, rental administration and security of the center in a professional manner. These are the basic tasks that the management team has to deal with. Apart from dealing with the daily operation of the center, increasing the attraction of the center is also the responsibility of the management company.

To cope with the changing lifestyle of customers, some management firms conduct market research and promotion to find out the customers' preference and needs and to gain more insight to the changing market. As such,

improvement could be made accordingly. Otherwise, the center would be outdated and become non competitive.

Promotion is key to attract customers. In Hong Kong, many regional centers have promotional events monthly or during festive seasons or days. These events include performance of entertainment groups, book fair, art exhibition, lucky draw, produce sale or even aquarium exhibits like the one held currently (April 2010) at the Olympian City. It is expected that all these activities could draw customers to the center and the tenants would benefit as a result of increased mall traffic. These promotions are also a venue to advertise the center itself and give the media something to write about.

2.4.4 *Internal design and environment*

The design of a shopping center determines the enjoyment of shoppers. A comfortable environment attracts more customers. No shoppers would like to stay in a stuffy environment. Therefore, the internal environment of the shopping center has to be kept at a satisfactory level. Cleanliness, lighting and regulated temperature are some key elements a mall management company has to keep an eye on.

2.5 Reason for the loss of shopping center attraction

A shopping center can lose its attraction for a number of reasons. These include physical wear and tear, changing requirements and preferences of retailers and consumers and other external factors such as public transport route changes or the confiscation of neighbourhood complementary land which was previously enjoyed by the mall (Guy Clifford, 1994).

Johnson (1996) indicated that, as society progresses, the use of buildings has become more temporal. He stated that 'advances in technology and commerce, and users demands for more comfortable environments for work and leisure have led to large numbers of buildings becoming obsolete or redundant and these changes have provided an abundance of buildings suitable for rehabilitation and reuse.'

It is a fact that buildings would become less attractive or depreciate over a period of time due to various reasons. Obsolescence is a reason for the value of a building to decrease. A shopping center depreciates faster than a street shop since it is made up of many more components that are subject to wear and tear and obsolescence. The floor, wall and ceiling finishes as well as the mechanical and electrical services are prone to faster physical deterioration in short and medium term (Salway, 1986). Apart from the physical obsolescence of the buildings, the changing requirement of consumers is another driving force for renovation. With the evolution technology,

Internet is a handy medium for shopping. Consumers have a choice of not going to the shopping centers to purchase goods. They could go shopping online and save themselves time and transportation cost. Moreover, consumers can browse more products and goods review over Internet and are less prone to impulse purchasing. As a result, there is a great pressure on the mall owners to keep their shopping centers at a high and current standard.

Increased living standard could be a factor affecting the need to keep the attractiveness of shopping centers. A shopping center built in the old days may not be able to meet consumers' requirements and expectations. A higher living standard means an increased demand for quality of life. An apparent example would be air-conditioning. Whilst it was considered a luxury in the 70's, air conditioning is regarded as a basic service to consumers in a shopping center nowadays. Therefore, a shopping center without air-conditioning is rarely found in Hong Kong. Even wet markets housed in community center buildings have air-conditioning. Because of this, shopping centers have to renew their physical plant from time to time to keep a competitive edge in attracting shoppers (Lance & Joseph, 1996).

In order to retain the attractiveness of shopping centers, their retailers have to ride on the next wave of the retail life cycle and attune to their customers' changing needs and wants (Kim, 2007). Renovation is effective to the shopping centers reaching the mature stage of the retail life cycle. They require major renovation or even revitalization of their aging facilities to

sustain a competitive edge (Kim, 2007).

2.6 General aspects of renovation

Buildings are major assets. Management of the building plays a vital role. Although buildings are long lasting, they require continual maintenance and restoration over their lives. Some buildings would eventually become inappropriate for their original purpose or turn obsolete due to a change in demand for their service (Langston, 2002). As a result, these buildings and shopping centers alike would become non competitive. Many shopping centers have thus undergone renovation. It is the view of some mall owners /mall management that if they could encourage more people to visit and spend more time in their shopping centers, they are likely to spend more money(Lowry, 1997); and that's what the owners would like to achieve to improve their bottom-line.

2.6.1 Definition of Renovation

There are many definitions of renovation. In this dissertation, renovation refers to the major mall overhaul undertaken by mall owners to maintain the value of the mall to meet the clients' (tenants and consumer) needs while retaining its original functionality.

Seeley (1987) defines renovation as the work done to restore a structure service and equipment by major overhaul to the original design. This includes limited additions, extension and improvements to the original buildings. Georg Giebeler (2009) defines renovation as a project to maintain the value and the function of the existing building through competent “up-keep”. Rented premises are typically renovated. The two definitions define very clearly renovation meant adjusting minor details and adding new facilities to the buildings. However, they have not included the fine-tuning of the overall character of a center which is improvement work done to the mall to maintain its value and showcase the grandiose aspects of the original building. ‘Maintenance’ and ‘refurbishment’ are improvement works that change the buildings noticeably but not radically or functionally.

Brian (2009) defines maintenance as the work, other than daily and routine cleaning, required to maintain the performance of the building fabric and its service. It is the totality of all actions to keep a building functioning effectively. In fact, it is very hard to distinguish between maintenance and renovation. They both maintain the intended use of the property. The only difference is maintenance aims at restoring the property to a satisfactory condition, while renovation takes a further step to modernize the building facilities for better performance.

Refurbishment, like ‘maintenance’, has a similar meaning with renovation. According to Craig Langston (2002), refurbishment includes minor work like redecoration of walls, floors and ceiling surfaces, installing new outfit,

rearranging space and other significant activities like façade upgrades, retrofitting of services, major reconstruction, extension and conversion to new functional use. Hall (1984) defined refurbishment as work necessary to totally overhaul a building and bring it to a client's requirement. Both renovation and refurbishment are referring to some forms of changes or improvement of the building. However, refurbishment has a distinct meaning, the conversion to new functional use of the building, which renovation does not include.

There is no universally accepted term for the different improvements made to buildings. Often, the terms mentioned above are used interchangeably.

Renovation could be undertaken by either the mall owners or the tenants. Major renovation is undertaken by mall owners to make facilities more productive or to attract higher rental income. Minor renovation is undertaken by tenants to reface or retrofit their space to attract customers and to create a new corporate image.

2.6.2 Major changes in the renovation projects

Renovation has been clearly defined for the context of this study. It refers to improvement work done to the building to maintain its value. There have been many books describing the improvement work of some renovation projects in overseas countries. For the projects in Hong Kong, there is

limited number of books or journals reporting the work done in renovation projects in details. This lack of information is compensated by the author's indepth interviews with experienced project managers who have undertaken renovation projects and have tracked their success. Some of the renovation projects in recent years completed by these managers and the improvement work included in each are documented in Appendices B-D. From the books and the interviews, it is deduced that the renovation projects, no matter local or overseas, basically involve three major changes and they are described as follows.

2.6.2.1 *Improved physical condition of the mall*

The shopping center is not attractive enough before renovation. In the renovation projects, the centers are re-designed by architects to give an appealing look and a pleasant environment for shopping. The building material is carefully chosen to modernize the center. Improvements usually include a new façade since the look of the mall affects its overall image. An attractive façade is likely to draw more shoppers while an outdated look would probably discourage shoppers to come. The floor and the ceiling are other major changes.

Apart from the improvement of the external wall, floor and ceilings, the lighting inside the mall is important. Usually, they have to be changed to brighter ones or relocated to light up the mall and to give an ambiance to the shoppers. The lighting change is a key improvement item in mall

renovations. In recent years, many renovated shopping centers have designs that allow more natural sunlight to come through to give visitors a more natural, warm and sunshine feel.

2.6.2.2 *Greater variety of tenants*

Renovation normally results in a change of tenant mix. Tenants may move out after renovation with the increase in rent. Their places would be replaced by other new tenants. The process of renovation may also have turned away customers for some retail tenants because of all the inconveniences, disruptions (mall services such as air conditioning or the retailers' hours of operation) created in the renovation period. This may end up as a loss of business for the tenants and hence they move out of the mall. Other retailers move in the renovated centers because of its improved environment and increased attractiveness to customers. The moving out of present tenants and the moving in of new retailers form a new tenant mix.

2.6.2.3 *High quality of customer service and security*

Renovation addresses both the "hardware" and "software" improvements on the mall. Hardware improvement refers to the changes or addition of new shopping center facilities. Software improvement would mean the introduction of customer services and security measures. In a renovated mall, it is common to spot new customer service officers around the mall to respond to customers' queries and new security guards to maintain the order

of the center so that shoppers could enjoy a safe shopping.

2.6.3 Benefits of Renovation

During the life span of every shopping center, there will be a time when the center must be renovated, expanded, reconfigured or redeveloped. The benefits of renovation are summarized as follow:

2.6.3.1 Improve physical appearance of shopping center

The physical appearance of a shopping center deteriorates and gets obsolete over time due. Facilities such as the pipe ducts, the floor tiles would also have aged. Renovation is one of the solutions to repair such kinds of defects and renew the mall. A renovated shopping center gives a fresh image to the customers. More importantly, it resets the shopping center to a good condition.

2.6.3.2 Enhance tenant mix

Renovation enhances or changes the tenant mix in a mall. Existing retailers moved out due to the obsolete conditions of the mall before renovation. If these retailers are anchor tenant(s), they may bring with them other smaller

retailers whose subsistence depends on the anchor tenants. Conversely, when new anchor tenants move in, other smaller retailers may also be attracted to the center.

Retail demand externalities, or customer traffic generators, are created when customers are drawn to a particular shopping center by an external force, usually by a sterling-name anchor tenant retailer. Retail demand externalities emanate from customers who are drawn to a shopping center by the anchor tenant and who then stop at the smaller, non-anchor tenant retailer (Mark J, 1994). The theory of retail demand externalities shows that anchor tenants have positive externality on small tenants who are not well-known to customers. Key tenants or anchor tenants determine the customer flow of the center. If the renovation of a shopping center could invite anchor tenant(s) to the center, customers would be drawn to the center and from afar. The increase in people traffic may in turn lure other smaller retailers to the mall.

With the enhanced mix of tenants and the increase in people flow, a renovated shopping center survives in the competitive market.

2.6.3.3 Develop a unique shopping center

Sometimes, customers go to the shopping centers not for the purpose of buying. They may go there because they enjoy the theme or culture of the

shopping malls (Lau, 2004). Renovation that transforms a mall into one with unique identity and one that is perceived as upscale and modern will help to increase the mall traffic. The ability to attract people to the malls is important in the modern days of the Internet era when online shopping is a rising competition to mall shopping.

Technological evolution makes existing buildings unsuitable for modern use (James Douglas, 2002). This obsolescence calls for a renovation. Renovation brings more uniqueness to a shopping mall.

2.6.3.4 *Increase rental income*

K.C Wong (1993) assumes that the rental income decreases over time as a mall aged. Renovation should be timely as over time, the net rental income from an aged mall will be decreasing while the cost of renovation will be on the rise. It means that the cost of renovation would be higher if the renovation is not done in an optimal time. On the other hand, with the increase in the economic value of a renovated shopping center, it is likely that the rent income increase accordingly. This assumption is supported by Pugh (1991). He estimated that the rental value of a commercial building could increase by over 60 percent to even 80 percent once renovated.

2.7 Difficulties for Renovation

2.7.1 Restricted construction working hours

The construction working hours of renovation usually are not as flexible as those of a new development project. The mall owner has to minimize disruptions and disturbance to the retail tenants (Schwanke, 1994). The construction work, under strict management, would have its efficiency reduced during the hours of center operation. To overcome these issues, usually the renovation is divided into phases and the center is renovated in stages. Extra safety precautions have to be taken to ensure the safety of the people in the mall while the renovation is going on.

2.7.2 Tenants' objection

Another difficulty of existing mall renovation is the objections or aggravation from retail tenants. Renovation brings along with it noise pollution and air pollution. Some areas in the center have to be warded off, prohibiting shoppers' access. Shoppers may get annoyed and visit the center less frequently, if at all. This in turn may disrupt the retailers' business. Renovation, therefore, is not likely agreed to by tenants.

2.7.3 Long Lease tenants

There may be several tenants who have signed long leases (say 5 years). It would be an obstacle to renovation if they are not willing to cooperate. Since renovation may involve rearrangement of shops or re-partitioning, its success relies on the cooperation of tenants. There may be situation that existing tenants and leases may require buyout, removal and/or moves that can complicate the renovation process and add to the costs (Schwanke, 1994). Should a lease have to be terminated prior to its expiry at no fault of the tenants, negotiations will have to take place and the owner may have to make up it with some form of financial compensation. Hence, it is important for the owner to keep a good relationship with the tenants. Communication between the center owner and the tenants is essential before renovation.

2.7.4 Higher operational costs

It is believed that renovation would result in a better internal environment with improved facilities and services. It involves extra running cost such as lighting. More staff like customer service officers is usually introduced to provide a quality center. This additional cost cannot be transferred to the tenants with existing lease. In other words, the owner has to bear the incremental cost until the lease is up for renewal. Conversely, the renovation may increase the overall operational cost of the shopping center.

2.8 Impacts of renovation on tenants and building owners

2.8.1 Impacts of renovation on tenants

Renovation creates a dynamic business environment to retailers, with a potential for increased shopper traffic and enhanced trade mix. Shoppers are attracted to the mall due to the improved physical condition of the mall or the many more variety of shops in the mall. It is evident that many popular retailers are attracted to the renovated centers thus creating a more diversified mix of tenants. Usually, there are promotional events in the mall upon its renovation, giving more energy and visibility to the center. Tenants benefit from the populous centers where mall traffic is high.

However, the tenants may have to bear an upward adjustment in the rent when the owner passes on the exorbitant renovation cost to the retailers. Small retailers may find it hard to sustain their business. Popular retailers introduced to the centers after renovation may also be a threat to these small retailers.

2.8.2 Impacts of renovation on building owners

Renovation may takes less time to complete than constructing a building. The time period to carry the financial outlay is shorter, thereby making the cost of borrowing, if any, lower. With the shorter time span in renovation

versus a new construction, the owner will be able to recover their expenses faster. New leases would bring them better revenue in renovated mall, reducing the period of their carrying the credit cost, if any (Georg, 2009). Renovation requires less time when compared to new construction. The cost of converting a building is generally less than a new construction because a number of structural elements such as the foundation can be reused. The cost-per-square-footage of buying an underperforming shopping center and renovating is often found to be significantly lower than building a new building (Schwanke, 1994). This explains the trend of increasing renovation in the retail industry, be it in Hong Kong or other cities.

Many old buildings often do not comply with the current regulation or building ordinance, as Georg (2009) described. Georg (2009) indicated that older buildings often do not meet the requirement of the current regulation on fire safety. According to Fire Safety (Commercial Premises) Ordinance, Cap 502, commercial buildings in Hong Kong built before 1987 are required to upgrade to comply with current standard when renovation is carried out in the buildings. As a result, alteration and additional works have to be done in the buildings to comply with the Code of Practice on fire safety, barrier free access and other regulations that are in effect. The owner also has to take extra measures to ensure the safety of the workers as mandated by the safety regulations imposed by the government. This means added complications and added cost, possibly, to the owners of the renovation project.

CHAPTER 3 HYPOTHESIS AND METHODOLOGY

In the previous chapter, the positive and negative benefits of renovation were discussed. On the positive side, they include physical appearance improvement on the building, attraction of potential tenants, rental income increase and an increase in mall traffic. In this chapter, a hypothesis is set for empirical test. The method for hypothesis evaluation will be introduced.

3.1 Hypothesis

The need to carry out renovation has been discussed in the previous chapter. In Background and Literature Review, the fundamentals for this study were established.

Renovation has been discussed by many academic journals and books as a means to eliminate the obsolescence of an outdated shopping center. According to the survey conducted by the author, many directors and owners of shopping centers claimed that the shopping centers which they had renovated have successfully drawn more customers and increased the number of tenants. Details are shown in Appendix E-J. Books, newspaper or professional journals reported that a renovated shopping center has a positive effect on mall traffic. However, no empirical test is done by any previous researchers and these statements may not stand. The author is thus interested to confirm the validity of all these claimed statements and conducted this study on it. The hypothesis of this study is

Renovation of a shopping center has a positive effect on the mall traffic.

3.2 Methodology

To confirm the above hypothesis, the author conducted an empirical test by collecting samples of mall traffic data in 27 shopping centers, both before and after renovation to determine if mall traffic does indeed increase after the renovation. The method of sampling was discussed below and the rationale for its inclusion or exclusion is stated.

The research is conducted on a sample of renovated shopping centers in Hong Kong. Hong Kong is a place with constant change of lifestyle and where people are always after fresh look and attracted to places which appeal to them, shopping center owners have limited choice but to keep upgrading or renovating their malls. Therefore, Hong Kong, with its many mall renovations, is chosen as the place for the research.

3.2.1 Method comparison -Sample collection

3.2.1.1 Interview with tenants

Tenants are the ones in the mall who are most astute to the volume of visitors in the shopping center, as visitors are their potential customers who bring

them income. If this theory holds, it is expected that these tenants would know if the mall traffic has increased or decreased after renovation. However, it is realized that the tenants' input are their observation and perception, not facts. They may be able to comment on the overall mall traffic, but they do not have the factual figure. Hence, interviewing tenants is considered not be the best way to know whether more customers are drawn to the renovated shopping centers; and this method of sampling is ruled out. Besides, to make the survey complete, all tenants in the mall have to be sampled and this is not a viable, if not time-consuming process.

3.2.1.2 *Collect data from the building owner/developer*

Other than asking tenants on their subjective view, the author deems it more reliable to use data collected from a more systematic method. For some shopping centers, the owners may have practices to collect mall traffic through manpower such as security guards or part-time staff, or they may have devices or an automated system to count the volume of customers in and out the centers. These data would be more objective than those obtained from the tenants; and more reliable. The author, hence, has adopted the method of collecting samples from owners of renovated shopping malls.

In order to obtain these samples, emails are sent to companies/developers who own retail properties which have been renovated in recent years, asking for information regarding renovation and the data on mall traffic before and

after renovation.

In the late January 2010, emails were sent to 12 companies to ask for these information and data. Only four companies responded. This study is based on the data provided by these four companies.

3.3 Method of Analysis

Two sets of data were collected from the companies. They are the number of customers visiting the center before renovation and the number after renovation. It would seem obvious that the differential will indicate if the mall traffic has increased or decreased after the mall renovation. However, it would be difficult to confirm the hypothesis simply by looking at each pair of sample data on its own. If the mall traffic of one shopping center does not increase after renovation, does it mean that the hypothesis could be rejected then? In doing a quantitative research, it is common to use some statistical measurement to analyze the data. The objective of a statistical test is to test a hypothesis concerning the values of one or more population parameters. It is measuring how likely it is that the difference between the means of the two groups is due to some real difference between groups and not due to random chance (Joseph, 2002). In this dissertation, null hypothesis significance testing is adopted and the particular test used is a paired t-test.

Paired T-test, as described in Miller (2004), is a statistical method to determine

whether differences in means or proportions between two groups of data are significant, or to determine whether a mean or proportion differs significantly from a specified value. Generally, it is used to compare the same sample at two different points in time, or after exposure to two different phenomena. It is applicable when dealing with “before and after” kinds of comparison. The hypothesis being tested in this research is whether renovation had a significant effect on the mall traffic of shopping centers. The essential elements of a test are:

1. Null hypothesis, H_0
2. Alternative hypothesis, H_a
3. Test statistic
4. Rejection region.

According to Miller (2004), null hypothesis and alternative hypothesis must be mutually exclusive. Commonly, null hypothesis is employed in supplementing the overall hypothesis and any sub-hypotheses. It lends rigour to statistically testing, in particular possible relationships between variables. According to Richard Fellow (1997), a null hypothesis is tested in comparison with its opposite, the alternative hypothesis. The usual form is that the null hypothesis speculates that there is no difference between. The alternative hypothesis speculates that there is a difference.

3.3.1 Testing a statistical hypothesis

The testing of a statistical hypothesis is the application of an explicit set of rules to decide whether to accept the null hypothesis or to reject it in favor of the alternative hypothesis (Miller, 2004). To accept or reject the null hypothesis, sample data were collected to compute the value of a test statistic, which is the third element of the t-test. The test statistic is calculated by the following formula:

$$T = \sqrt{n} (\bar{X} - \mu_D) / \sigma$$

The test procedure partitions the possible values of the test statistic into two subsets: an acceptance region for H_0 and a rejection region for H_0 . Sometimes, testing a hypothesis yields an incorrect result in two different ways. They are named as type 1 error and type 2 error.

Definition

Type 1 error

Rejection of the null hypothesis when it is true is called a type 1 error; the probability of committing a type 1 error is denoted by α .

Type 2 error

Acceptance of the null hypothesis when it is false is called a type 2 error; the probability of committing a type 2 error is denoted by β .

The probability is also referred to as the *level of significance* in the test. It will be decided so that the appropriate value of t from the Table of the t-distribution can be determined.

Table 1: T-distribution Table

Degree of freedom\ probabililty	0.40	0.25	0.10	0.05	0.025	0.01	0.005	0.0005
1	0.324920	1.000000	3.077684	6.313752	12.70620	31.82052	63.65674	636.6192
2	0.288675	0.816497	1.885618	2.919986	4.30265	6.96456	9.92484	31.5991
3	0.276671	0.764892	1.637744	2.353363	3.18245	4.54070	5.84091	12.9240
4	0.270722	0.740697	1.533206	2.131847	2.77645	3.74695	4.60409	8.6103
5	0.267181	0.726687	1.475884	2.015048	2.57058	3.36493	4.03214	6.8688
6	0.264835	0.717558	1.439756	1.943180	2.44691	3.14267	3.70743	5.9588
7	0.263167	0.711142	1.414924	1.894579	2.36462	2.99795	3.49948	5.4079
8	0.261921	0.706387	1.396815	1.859548	2.30600	2.89646	3.35539	5.0413
9	0.260955	0.702722	1.383029	1.833113	2.26216	2.82144	3.24984	4.7809
10	0.260185	0.699812	1.372184	1.812461	2.22814	2.76377	3.16927	4.5869
11	0.259556	0.697445	1.363430	1.795885	2.20099	2.71808	3.10581	4.4370
12	0.259033	0.695483	1.356217	1.782288	2.17881	2.68100	3.05454	4.3178
13	0.258591	0.693829	1.350171	1.770933	2.16037	2.65031	3.01228	4.2208
14	0.258213	0.692417	1.345030	1.761310	2.14479	2.62449	2.97684	4.1405
15	0.257885	0.691197	1.340606	1.753050	2.13145	2.60248	2.94671	4.0728
16	0.257599	0.690132	1.336757	1.745884	2.11991	2.58349	2.92078	4.0150
17	0.257347	0.689195	1.333379	1.739607	2.10982	2.56693	2.89823	3.9651

18	0.257123	0.688364	1.330391	1.734064	2.10092	2.55238	2.87844	3.9216
19	0.256923	0.687621	1.327728	1.729133	2.09302	2.53948	2.86093	3.8834
20	0.256743	0.686954	1.325341	1.724718	2.08596	2.52798	2.84534	3.8495
21	0.256580	0.686352	1.323188	1.720743	2.07961	2.51765	2.83136	3.8193
22	0.256432	0.685805	1.321237	1.717144	2.07387	2.50832	2.81876	3.7921
23	0.256297	0.685306	1.319460	1.713872	2.06866	2.49987	2.80734	3.7676
24	0.256173	0.684850	1.317836	1.710882	2.06390	2.49216	2.79694	3.7454
25	0.256060	0.684430	1.316345	1.708141	2.05954	2.48511	2.78744	3.7251
26	0.255955	0.684043	1.314972	1.705618	2.05553	2.47863	2.77871	3.7066
27	0.255858	0.683685	1.313703	1.703288	2.05183	2.47266	2.77068	3.6896
28	0.255768	0.683353	1.312527	1.701131	2.04841	2.46714	2.76326	3.6739
29	0.255684	0.683044	1.311434	1.699127	2.04523	2.46202	2.75639	3.6594
30	0.255605	0.682756	1.310415	1.697261	2.04227	2.45726	2.75000	3.6460
∞	0.253347	0.674490	1.281552	1.644854	1.95996	2.32635	2.57583	3.2905

Source: Distribution Tables

<http://www.statsoft.com/textbook/distribution-tables/#t>

By observing the t Table, the critical value can be found. It is then used to determine if the null hypothesis is to be accepted or rejected for the different degrees of freedom and the different α (level of significant).

3.4 Research framework and variable selection

The research framework employed in this study is presented in Table 2.

Shopping center	Before renovation(X_i)	After renovation(Y_i)	% Change in people flow= $(Y_i-X_i)/X_i*100\%$
1	X_1	Y_1	$(Y_1-X_1)/X_1*100\%$
2	X_2	Y_2	$(Y_2-X_2)/X_2*100\%$
3	X_3	Y_3	$(Y_3-X_3)/X_3*100\%$
4	X_4	Y_4	$(Y_4-X_4)/X_4*100\%$
5	X_5	Y_5	$(Y_5-X_5)/X_5*100\%$
6	X_6	Y_6	$(Y_6-X_6)/X_6*100\%$
X	X_x	Y_x	$(Y_x-X_x)/X_x*100\%$

Table 2: The research framework and variable selection

Null Hypothesis: $H_0: \mu_D=0$

Alternative hypothesis: $H_a: \mu_D>0$

where μ_D =Mean of % change in people flow

It is assuming that the difference $D_i=(Y_i-X_i)/X_i$ is normally distributed with mean μ_D and a variance σ^2_D . $\mu_D=0$ would mean that there is no difference in average weekly people flow, before and after renovation. Conversely, this indicates that the renovation is not benefitting the shopping center at all. If $\mu_D>0$, the renovation is associated with an increase in average weekly people flow after the shopping center has been renovated.

The research contains two independent variables, which are X_i and Y_i . For each renovated shopping center, the mean of people flow of the previous three months before renovation was calculated and stated in Column (X_i). The figure in Column (Y_i) is the mean of people flow of the renovated center counted in the three months after renovation.

To determine the effectiveness of a renovation project, the data are collected over a period of six months on the average weekly change of people flow in 27 shopping centers before and after the mall renovation. By analyzing the collected sample, the mean and standard error of % change in people flow can be computed. Thus, the test statistic can be obtained. A 5% level of significance is used to check if whether or not the null hypothesis is effective and hence if it can be rejected in favour of the alternative hypothesis. The critical value is then extracted from the t-distribution Table. By comparing the critical value with the test statistic, it could be determined if the null hypothesis can be rejected. If the test statistic is greater than the critical value, the null hypothesis can be rejected.

CHAPTER 4 DATA ANALYSIS AND DISCUSSION

This chapter presents the background information of the sample collection, followed by the result of t-test and its implication. The conclusive findings are included in the latter part of the chapter together with the author's thoughts and suggestions to mall owners on renovation.

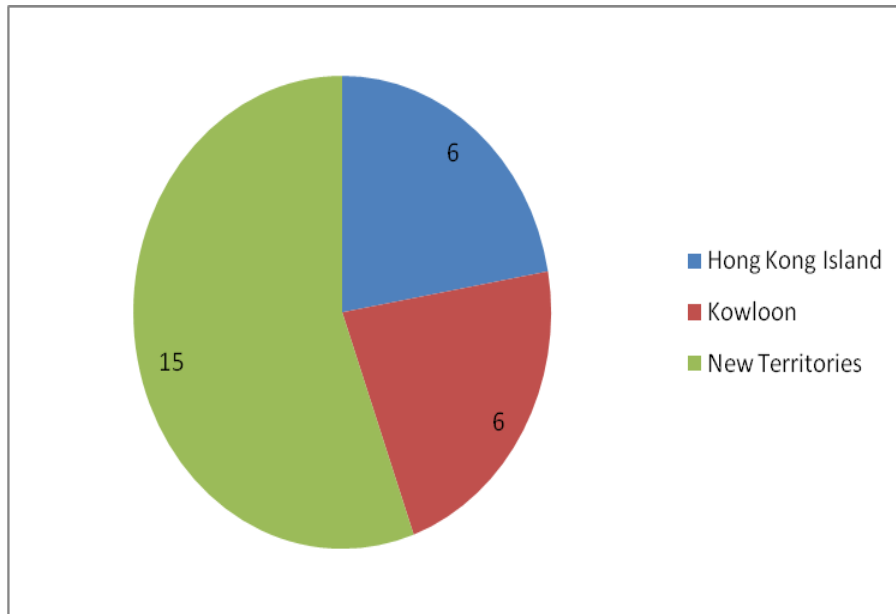
4.1 Background information of the sample collected

In late January 2010, formal letters and email were sent to twelve companies which own shopping centers in Hong Kong, asking for information regarding renovation of the centers. A month or so later, four companies responded to the author's request and provided some information of the renovated shopping centers and the renovation details (See Appendix K, Appendix L). Others either refused to provide the requested information or did not reply. The response rate, as a result, was 33 percent. The low response rate was due to the fact that those companies that did not respond considered the data as sensitive and confidential; or that they were concerned with any consequences that might arise from disclosing such information.

A total number of 27 shopping centers were used as the samples of this research. They are distributed in Kowloon, Hong Kong Island and New Territories as in Figure 2. The exact locations of the shopping centers are presented in Appendix K. The background information such as the age and GFA (Gross Floor Area) of the centers are stated in the research, but the names of the shopping centers are kept anonymous as requested by the mall

owners.

Figure 2: Distribution of collected sample (shopping centers)



There are all together 27 shopping centers with 6 of them located in Kowloon, 6 of them on Hong Kong Island and the remaining in the New Territories. The age of the centers range from 9 to 35 years. The majority of the shopping centers undergone renovation are of 10 to 20 years. They are represented in Figure 3. Other information of shopping centers are included in the Appendix L.

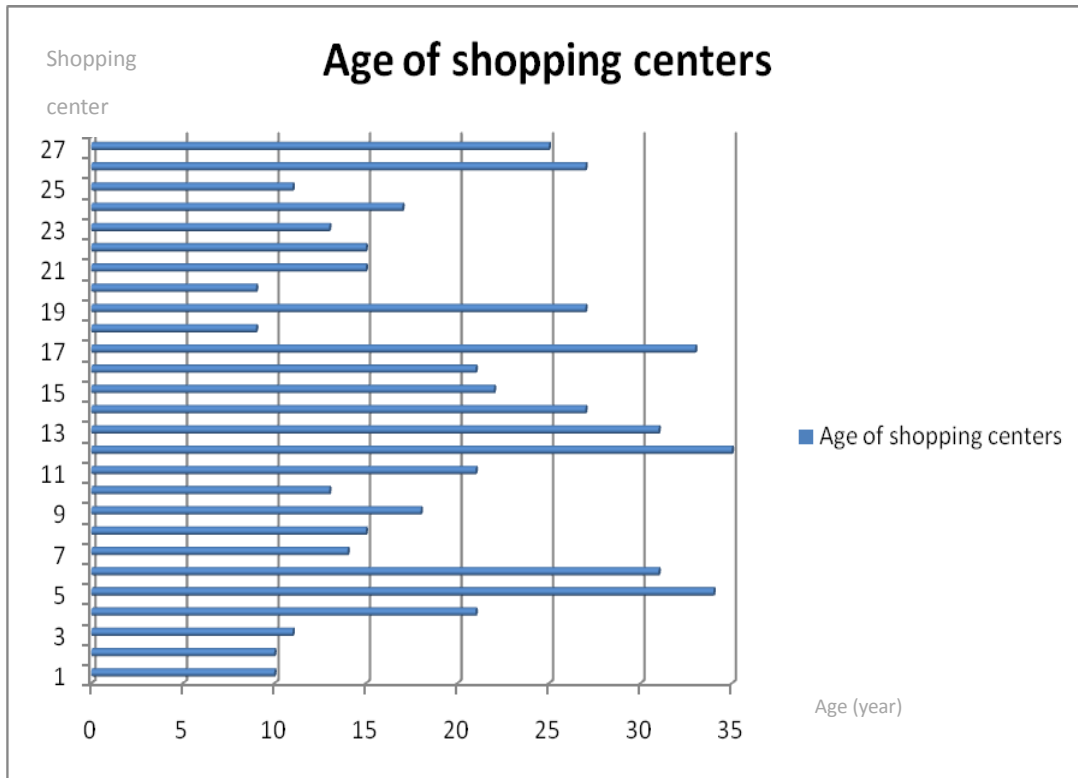


Figure 3: Age of the shopping centers

4.2 Empirical test

As discussed in previous chapters, there are several reasons for a shopping center to undergo renovation. One of them is to draw more customers to the center. 27 renovated shopping centers were used in the statistical test to determine if renovation would increase the mall traffic or people flow. As stated by the companies, the data on the mall traffic of shopping centers are collected through an infrared counting system installed at the entrance of the centers. Table 3 presents the data on the average number of people, on a weekly basis, that passed by these counting systems before and after the mall renovation.

Table 3: Analysis of people flow in each shopping center

Shopping center	Before renovation (average weekly)	After renovation (average weekly)	Difference	% change
1	90600	90565	-35	-0.04%
2	97000	96980	-20	-0.02%
3	239700	241357	1657	0.69%
4	100676	104554	3878	3.85%
5	109000	114156	5156	4.73%
6	96756	101594	4838	5.00%
7	123760	132556	8796	7.11%
8	129680	143121	13441	10.36%
9	131440	145200	13760	10.47%
10	707566	789567	82001	11.59%
11	154790	174677	19887	12.85%
12	608590	687899	79309	13.03%
13	428699	486800	58101	13.55%
14	109500	124534	15034	13.73%
15	318700	363000	44300	13.90%
16	675378	778634	103256	15.29%
17	134160	154700	20540	15.31%
18	307881	356477	48596	15.78%
19	141579	165230	23651	16.71%
20	42167	49987	7820	18.55%
21	91657	109355	17698	19.31%
22	855750	1026900	171150	20.00%
23	207598	251460	43862	21.13%
24	98068	125677	27609	28.15%
25	670000	893450	223450	33.35%
26	351973	668747	316774	90.00%
27	348750	673456	324706	93.11%

4.2.1 *Evaluation of hypothesis*

The hypothesis established in Chapter 3 is evaluated on the statistics in Table 3. The table shows the average weekly people flow in the renovated shopping centers three months before renovation and three months after renovation. The difference between the respective pairs and the percentage change are then calculated and tabulated in the last two columns of Table 3.

The null and alternative hypothesis

The research is to test whether or not more customers are attracted to renovated shopping centers. Thus, the research hypothesis, also known as alternative hypothesis, is

$$H_a: \mu_D > 0$$

where μ_D = mean of % change of people flow

The null hypothesis is that there is no difference in people flow before and after renovation. This is expressed as:

$$H_0: \mu_D = 0$$

where μ_D = mean of % change of people flow

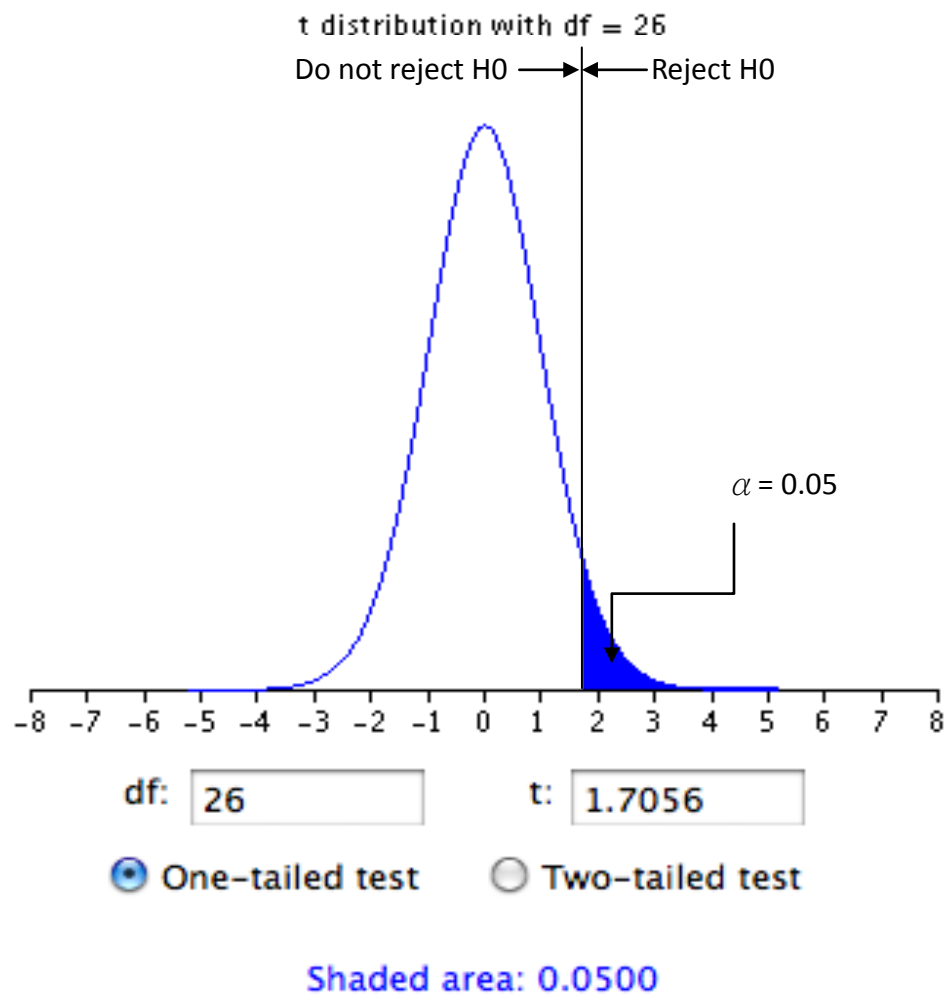
For this test, the significant level is 0.05 as stated in Chapter 3. The > sign in the alternative hypothesis indicates that the test is right-tailed and the rejection region lies in the right tail of the t-distribution curve.

$$\text{Area in the right tail} = \alpha = 0.05$$

Degree of freedom= $n-1 = 27-1 = 26$

From the t distribution Table, the critical value of t for 26 degree of freedom and 0.05 area in the right tail is 1.7056. This value is shown in Figure 4.

Figure 4: Result of t-test



The value of the test statistic T for $\bar{X}=27$ is calculated as follows:

$$\begin{aligned} S_{\bar{x}} &= \sigma / \sqrt{n} \\ &= 0.224115 / \sqrt{27} \\ &= 0.043130996 \end{aligned}$$

$$\begin{aligned}
T &= (\bar{X} - \mu_D) / S_{\bar{x}} \\
&= (18.8 - 0) / 0.043130996 \\
&= 4.516351
\end{aligned}$$

The value of the test statistic $T=4.516351$ is larger than the critical value of $t=1.7056$, and it falls in the rejection region. Consequently, H_0 is rejected. As a result, it can be concluded that the value of the sample mean is too large compared to the hypothesized value of the population mean. The mean number of people flow after renovation is greater than zero. Thus, renovation of a shopping center is effective in that it could attract more customers. The research hypothesis-“*Renovation of a shopping center has a positive effect on the mall traffic.*” cannot be rejected.

4.3 Implication of the result

The result from the t-test showed that renovation of a shopping center attracts more shoppers. The people flow of the center increased after renovation. This implies that the effects of renovation are positive and it is beneficial to both the tenants, the owner of the center and the shareholders who have a vested interest in the company that owns the shopping center.

4.3.1 Benefits to tenants

When the people flow of the shopping centers increases, tenants are the ones

who benefit the most. Shoppers are their source of income and for some, are their only income. Unless the tenants have a binding contract, they can move away from the shopping center should the number of shoppers is low creating a low turnover in their earnings.

After renovation, the rent may increase. Some tenants who do not have a binding contract may choose to move out of the center. Depending on the nature of these moved-out tenants, there may be a cyclic effect of reduced business on those remaining retailers whose subsistence depends on the moved out retailer. From a short term perspective, renovation may bring negative impacts to present tenants, especially the small ones.

In the long term, retail tenants do benefit from a renovated shopping center. Many large retailers like chain stores prefer to operate in a renovated shopping center as they see the potential. Again, the presence of these prominent stores may bring about improved business on other retailers in the mall.

Some tenants support renovation by making over their own store to match theme, the look-and-feel and the style of the new mall. An example is a hair salon in Wong Tai Sin Shopping Center which has undergone a renovation (see Appendix M). This individual facelifts add to the summed value of the renovated mall.

4.3.2 Benefits to the owners of shopping centers

Shopping centers, after renovation, provide a more ideal environment for their different users: customers, visitors, retailers and the mall management team. The competitiveness of a renovated shopping center may increase gradually and this is what the owners desire to achieve. However, as renovation involves huge capital outlay and there is no guarantee that the money spent could be recovered, it is always a tough decision for the center owners to decide if renovation should or not go ahead. Nonetheless, should it be a proven fact that the mall traffic would increase with the renovation, the owners might be more at ease and feel less financially risky to renovate a mall. The increased mall traffic is a sign of the center's popularity and competitiveness. This translates to more tenants moving in, lower vacancy rate and more rental income for the owners.

4.3.3 Benefits to investors

Shareholders of the company that own the shopping mall would be happy when the mall traffic increases. An insignificant amount of visitors to a mall would certainly discourage potential investors to invest in a company whose asset is not carrying value. It is surmised that more investors will be interested in renovated shopping centers if increased mall traffic is

guaranteed and when they find the company's financial statements sound and information in their annual reports forward looking.

Undertaking renovations is a sign of the company being progressive, having the intention to improve their asset to adapt to the changing demands and needs of the society. When a shopping center still shows a rise in mall traffic after several years of renovation, the investors would have more confidence in the company and likely to keep investing, if not more, on it rather than on those which are not upgrading their centers.

4.4 Suggestions to the owners of shopping centers

Earlier, it has been confirmed that renovation of shopping center has a positive effect on the mall traffic. However, this does not imply that the mall traffic would always increase should the renovation not meet the needs and demand of the consumers and the retail tenants. To maximize the positive effects of renovation, the author offers the following suggestions for the owners of the shopping centers to consider.

4.4.1 Choice of center

When the owner has a number of malls that require renovation, the priority of renovation is something a mall owner has to consider. Assuming all other conditions including the shoppers' demand remain the same for all malls, the

author suggests the owner to consider a mall with higher accessibility and put it on top of the list. Imagine that a shopping center in Lamma Island has been renovated with luxurious decorations. Customers who wish to visit the center would have to travel a long way to shop at the center. They would probably be discouraged by the inaccessibility of the center. Hence should there be a need to prioritize renovation for malls, it would be better to choose the mall which could be easily accessed by various forms of transportation and from different directions.

4.4.2 Collect consumers' opinion before undergoing renovation

The shopping environment should be designed to attract consumers, the customers of the retail chain. The more the needs of shoppers are closely met, the more are the shoppers attracted to the mall, and hence the more success is the center. It is therefore essential to know what the customers are looking for in the center before carrying out renovation. The range of questions typically can include their shopping behaviour and expectation, their reason for shopping in that center, their spending patterns, their retailer preferences and the shoppers' profile.

Shoppers' behaviour and expectation determine the types of improvements to be made. The reasons for visiting the center, whether they are there to buy, to browse, to entertain or to eat have to be known. This could help in determining the ranges and types of services offered in the center. The criteria these customers used to determine what they consider as a shopping

destination of their choice should be identified. Their motivation of visiting a shopping center may include convenience of location, quality of the center, facilities provided in the center or others. This list serves as a guide for the owner to determine the scope of work and the priority of the work. For example, if the majority of the surveyed customers consider quality of the center as the key motivator to visit the center, the owners might think about hiring more quality staff members and install better security. It would not be a wise investment to improve in some areas where the customers consider not or the least important.

Knowing what shoppers most and least like about the present retailers is useful for the renovation project. It provides reference to the owner of the center in renewing the tenant mix. The mix of tenants determines the attractiveness of the center. Many renovated shopping centers brought a new combination of retailers to shoppers to provide more choices of shopping or dining. The author, however, still thinks that it is essential to know what exactly the customers desire before inviting certain retailers to the center. For example, inviting a Korean restaurant to a center mainly frequented customers who prefer Japanese food may not help draw more customers. Hence, it is vital to understand what the customers' needs or even their wants in the case of a shopping mall, including their preference of retailers. Knowledge of the customers' spending pattern and amount would help to understand the type of retailers the consumers prefer.

Apart from the customers' needs or preferences, the owner also would profit

from knowing the shoppers' profile. A shopper profile may include the district where they live, their age, their personal income, the age group of their children and if they bring to shopping children under a certain age. Knowing where the shoppers live and their way of commuting to the center would be useful information to determine if there is a need for parking spots and how many. The age of the shoppers and whom they bring along would help in determining the facilities and services provided in the center. The monthly income of the shoppers would be valuable information for the choice of retailers in the center: upscale, posh or ordinary.

4.4.3 Collect tenants' opinion before undergoing renovation

In order to retain the mall traffic, the shopping center should be renovated to meet the consumers' requirements. However, the opinion from tenants on the renovation is also valuable input in formulating the strategy in renovation. Some tenants are the "soul" of the center. The owner could not afford to have tenants which are the favourites of consumers moving out of the mall because they are not satisfied with the renovation. Hence, opinions from existing tenants are important. Discussion with the decision-making person such as the store manager of the key tenants is vital before renovation. This is also a sign of courtesy and respect to the tenants which they would welcome. The questions may include the preferred size of the renovated center when expansion takes place, suggested improvements for the center, any new co-tenants they like or even their observations of the customers' purchasing habits.

Apart from collecting opinions from existing tenants, interviews with prospective retailers are useful. If the owners are thinking of attracting a new anchor tenant, it will be essential to determine what their requirements are in terms of location in the mall, the indoor environment of the center, their customer spending and so on. In this way, the renovation center would not be an unhappy surprise to the tenants.

4.4.4 Promotion

Many renovated shopping centers carry out promotional activities when the renovation is completed. The author still thinks there is room for improvement in the promotional activities. For example, more innovative events can be introduced; more advertising using different media: Roadshow on buses, the daily free newspapers which have a high circulation, TV's and Internet, a favourite pastime for most of the younger generation. The promotions and advertising are especially important for malls in more remote locations. The promotions have to be carried out on a regular basis rather than just at the onset of the renovation completion.

The author does have the conviction that if the above additional steps were taken by the owners, there would certainly be a rise in mall traffic and the sustainability rate of this increase would also be high. Shoppers may not only be looking for improved hardware and software and in the added tenant

mix, they are looking for the experience, an enjoyable one, they have in the malls.

Thus, it is essential to involve the stakeholders: consumers, tenants alike, upfront in the planning stage and understand their needs, wants and preferences.

CHAPTER 5 CONCLUSION

This chapter concludes the discussion by summarizing the objectives, the research findings and implications. The limitation of the study and areas for further study are stated at the end of this chapter.

5.1 Review of Research

This research has covered the critical success factors for shopping centers, the need for their renovation, the benefits and the difficulties of renovation to the owners, the tenants and to the shoppers. It focused the discussion on the correlation between mall traffic and the renovation of the mall

The definitions of renovation, maintenance and refurbishment were discussed. The term 'renovation' used in the context of the paper was clarified.

It was identified that there are benefits to a renovated mall, despite difficulties during or prior to renovation.

A renovated shopping mall would increase the mall traffic with its improved look to keep up with the latest trend, its improved physical condition and facilities, the new tenant mix offering more goods and service choice for the consumers. The higher people flow would bring on potentially more business to the retail tenants. Despite some tenants might move out because

of the increase in rent, there would be new ones attracted to the mall with its changed look-and-feel. This in turn would bring more rental income to the shopping mall owners as new leases are signed.

As mentioned, journals and books concluded that the visitors to the mall would increase with a mall renovation. However, there was no study on the correlation of mall traffic with the mall's renovation; neither any empirical test done on such. Hence, the author undertook a statistical analysis using the paired t-test method to evaluate this relationship and came to the conclusion that a renovated mall does indeed increase the people flow in the mall.

The data regarding the number of shoppers in the mall before and after renovation was collected through formal letter and email to the owners of shopping center. Statistic test was then used for evaluation. The findings confirmed that mall traffic has a positive significant relationship with the renovation of the shopping center. The research hypothesis could not be rejected.

The author realized that the hypothesis 'renovation of a shopping mall has a positive effect on mall traffic' might not necessarily stand should the mall be not renovated to the needs and preference of the consumers or tenants. The author thus offered some suggestions in the paper to the owners of the shopping malls for them to consider in their strategic planning stage. These were to seek input from the all stakeholders prior to renovation and

incorporate them in the renovation. They include input from the consumers on their needs, wants and preferences, from key tenants, existing, new or prospective, on their requirements. The author has the conviction that with the proposed planning measures, the success of sustaining the increased mall traffic would also be greater.

5.2 Implication of research

The result from the paired sample t-test demonstrates that the value of the test statistic $T=4.516351$ is larger than the critical value of $t=1.7056$, and it falls in the rejection region. Hence, it rejected the null hypothesis. That is to say the people flow is impossible to remain unchanged after renovation. The result is significant since the value of the test statistic is very large. It is much larger than the critical value. Even when the level of significant is specified as 0.01 rather than 0.05, the result is still larger than the critical value of $t=1.7056$. It thereby confirms that the people flow is very likely to be influenced by the renovation.

The research confirmed that renovation of a shopping center has a positive effect on its people flow. Other positive effects are presented in Figure 5. A renovated shopping center usually attracts new tenants and a more variety of tenant mix when the renovation meets their requirements. An expanded premise also helps to increase the number of tenants. The enhancement of tenant mix together with the improvements to the center would draw more

customers/visitors to the center, resulting in more potential sales. The tenants would enjoy more sales return while the building owner extra rent.

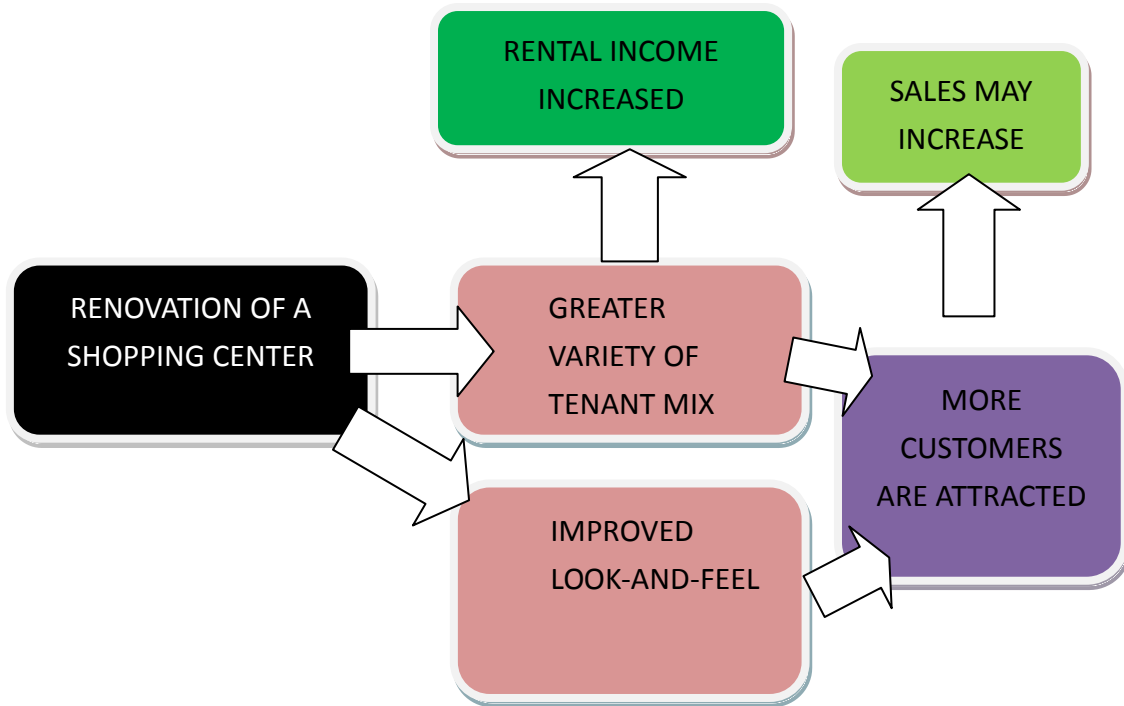


Figure 5: Research conclusion

According to the author, the above benefits could be better achieved if the owners of shopping centers conduct a comprehensive research with the consumers, the existing tenants, the new and prospective tenants prior to renovation, to find out what their requirements, needs and preferences are and take them into consideration when developing the renovation strategy.

The author believes that renovation of a shopping center could create a more desirable shopping environment to shoppers and give its retail tenants a competitive edge.

5.3 Limitation of the study

The validity of the result heavily depends on the sample size. The number of shopping centers sampled is only a small fraction of the total number of renovated shopping centers in Hong Kong. There are only 27 renovated shopping centers sampled as requested data is not available from a number of mall owners for reason of confidentiality. The sample size, as a result, is not representative of the population in Hong Kong which is estimated to be around 8 million or more. More importantly, the test result may vary when other data from more renovated shopping centers are included in this study. Hence, the finding should not be generalized. The limited resource data available to conduct the research made this constraint unavoidable.

The research only focuses on the mall traffic. Other information like the adjusted rent of the renovated shopping centers cannot be obtained as it is a proprietary secret. The scope of study is thus confined.

5.4 Area for further studies

As said above, the study addresses only the mall traffic of the shopping center before and after renovation. In fact, there are many other aspects which are worth studying. They are discussed below.

5.4.1 *Benefits of renovation*

This research has focused on one of the many benefits that arise from renovation of a shopping mall. Besides the mall traffic of centers before and after renovation, other impacts that worth further study include the vacancy rate and how it correlates with renovation, the level of satisfaction increase (or decrease) on the part of the visitors and retailers after the renovation and the mall traffic on an ongoing basic.

5.4.2 *Decision on renovation*

There are over hundreds of shopping centers in Hong Kong, but not all have been renovated as one could observe. The factors affecting the decision to carry out renovation in shopping centers are worth a study.

5.4.3 *Impacts of renovation on residential price*

Almost all shopping centers in Hong Kong are surrounded by residential buildings. Some centers are built on the lower levels of residential buildings. It's worth exploring the impact of the renovated centers on the price of residential units in the vicinity.

5.4.4 Consumers and retailers' perspective on renovation of shopping centers

As discussed earlier, it is beneficial to the owners to get input from retailers and consumers before the renovation starts. It is worth doing a 'post audit' on their satisfaction level upon completion of the renovation and on an ongoing basis. The better the needs of the retail tenants and consumers are met, the more success will be the shopping center and the better return will it be on the investment put in by the owners. The input can also be used as reference for future or other malls' renovation.

REFERENCES

- Ball, M. and Grilli, M. (1997) UK commercial property investment: time-series characteristics and modeling strategies, *Journal of Property Research*, vol 14, pp279-296
- Barras, R. and Clark, P. (1996) Obsolescence and performance in the Central London Office market, *Journal of Property Valuation & Investment*, vol 14(4), pp.63-78
- Barras, R. and Ferguson D. (1987) Dynamic Modelling of the Building Cycle, *Environment and Planning A*, vol 19, pp.493-520
- Baum, A. (1991) *Property Investment Depreciation and Obsolescence*, London: Routledge
- Beddington, Nadine (1991). *Shopping Centers: retail development, design and management*, Oxford (England), Boston: Butterworth Architecture
- Benjamin, J. and Eppli, M. J. (1994) The Evolution of Shopping Center Research: A Review and Analysis, *Journal of Real Estate Research*, vol 9(1), pp.5-30
- Black, J. Thomas (1983) *Downtown retail development: conditions for success and project profiles*, Washington, D.C.: ULI-the Urban Land Institute

Brian Wood (2009) *Building maintenance*, Ames, Iowa: Blackwell

Chau K.W., Leung, A.Y.T., Yiu, C.Y. and Wong, S.K. (2003) *Estimating the value enhancement effects of refurbishment*, *Facilities*, vol 21 (1/2), pp.13-19

Chui F.C. (2004). *The determinants of renovation frequencies: An empirical study of shopping centers in Hong Kong*, unpublished BSc dissertation submitted to Dr. K.C Wong

Craig Langston (2002). *Strategic management of built facilities*, Oxford, U.K: Butterworth-Heinemann

Fung H.S.(1994). *Study of old shopping centers in public housing estates*, unpublished BSc dissertation submitted to Dr. Daniel C.W Ho

Georg Giebeler (2009). *Refurbishment manual: maintenance, conversions, extension*, Munich: Edition Detail

Guy Clifford (1994). *The retail development process: location, property, and planning*, London, New York: Routledge

Hall, G.T. (1984) *Revision Notes on Building Maintenance and Adaption*, London: Butterworth & Co

Hearn, Lawrence. (1995) Retaining tenants during renovation, *Journal of Property Management*, vol. 60(4), pp28

Highfield, D. (1987) *Rehabilitation and Re-use of Old Buildings*, London: E&F.N.Spon

Hui W.M. (2006) *Revitalization of neighborhood shopping center in old district: a case study of Grandeur Shopping Arcade in Tai Wai, N. T.*, unpublished M. House dissertation

James Douglas (2002) *Building Adaptation*, Oxford: Butterworth-Heinemann

John A. Dawson & J. Dennis Lord (1985) *Shopping center development: policies and prospects*, USA: Nichols Publishing Company

John R. Knight, & Simans, C.F. (1996) Depreciation, Maintenance, and Housing Prices, *Journal of Housing Economics*, vol 5, pp269-289

John R. White and Kevin D. Gray (1996) *Shopping centers and other retail properties: invest, development, financing, and management*, New York: John Wiley & Sons

Jones, Colin Seymour (1969) *Regional shopping centers: their location, planning and design*, London: Business Books

Joseph Janes (2002) Comparing the means of two groups-the test, *Journal of Library Hi Tech*, vol 20,pp. 469-471

Joseph P. CILIA (2000) *Shopping center redevelopment and renovation*, New York: International Council of Shopping Centers

K.C. Wong and George Norman, The optimal time of renovating a mall, *Journal of Real Estate Research*, 1994, vol 9, pp. 33-48.

Kim, Youn-Kyung (2007) *Experiential retailing: concepts and strategies that sell*, New York: Fairchild Publications, 2007

K.W.Chau, A.Y.T.Leung, C.Y.Yiu, & Wong S.K. (2003) Estimating the value enhancement effects of refurbishment, *Facilities*, vol 1(2), pp13-19

Langston and Craig (2002) *Strategic management of built facilities*, Oxford, U.K: Butterworth-Heinemann

Lau T.S. (2004).*District revitalization project Sheung Wan shopping node*, unpublished M.Arch dissertation

Litchfield, Michael W (1982) *Renovation: a complete guide*, New York: Wiley

Loo, F. (1991) *A Guide to Property Management in Hong Kong*, Hong Kong:

Hong Kong University Press

Lowry, J. R. (1997) *The life cycle of shopping centers*, Business Horizons, January-February, pp. 77-86

Mark J. Eppli, John D. Benjamin (1994) The Evolution of Shopping Center Research: A Review and Analysis, *The Journal of Real Estate Research*, 9(1).

Markus, A.M. (1979) *Building Conversion and Rehabilitation: Designing for Change in Building Use*, London: Newnes-Butterworth

Miller, Irwin. (2004) *John E. Freund's mathematical statistics with applications*, Upper Saddle River, NJ: Prentice Hall

Morgan, Peter. (1988) *Retail development*, London: Estates Gazette

Norman, G. and Flanagan, R. (1989) *Life Cycle Costing: Theory and Practice*, Oxford, UK: Blackwell Scientific Publishers

Northen, R.I. (1977) *Shopping centers: a developer's guide to planning and design*. College of Estate Management

Prem S. Mann (1998) *Introductory statistics*, New York: Wiley

Pugh, C. (1991) *The Cost and Benefits of Rehabilitation and Refurbishment*, Journal of Property Management, vol. 9(2), pp.143-156

Pugh, C. (1992) *The Refurbishment of Shopping Center*, *Journal of Property Management*, vol 10(1), pp.38-46

Richard Fellow, Anita Liu (1997) *Research methods for construction*, Oxford: Blackwell Science

Ronald M. Weiers (2005) *Introduction to Business Statistics*, Belmont, CA: Thomson Brooks/Cole

Ron Sher and Merritt Sher (1996) *Developing and Investing in Local and Community Centers and Highway Retail*

Rubenstein, Harvey M. (1978) *Central city mall*, New York: Wiley

Salway, F. (1986) *Depreciation of Commercial Property*, CALUS, College of Estate Management, Reading

Schwanke, Dean. (1994) *Remarking the Shopping Center*, Washington, D. C.: ULI-the Urban Institute, 1994

Seeley, I. H. (1987) *Building Maintenance (2nd ed)*, Basingstoke: Macmillan Publishers

Shum C.M (1993) *Factors determining the performance of a shopping center-special reference to the center under the Hong Kong Housing Authority*, unpublished BSc dissertation submitted to Professor K.W.Chau

Sigsworth, E. M. and Wilkinson, R. K. (1967) *Rebuilding or Renovation?*, *Urban Studies*, vol. 4(2), pp. 109-121

Sirmans, C. F. and Guidry, K.A. (1993) The determinants of Shopping Center Rents, *Journal of Real Estate Research*, vol 8(1), pp.108-114

Walker, A. (1992) Retail Refurbishment: Designs for the Next Decade, *Journal of Property Management*, vol 10(4), pp.354-360

Wee, Keng Neo Lynda (2005) *The 4 Rs of Asian shopping centre management*, Singapore: Marshall Cavendish Academic

Web-sites:

Census and Statistic Department, <http://www.censtatd.gov.hk>

International Council of Shopping Center, www.icsc.org

Ming Pao news,
<http://hk.news.yahoo.com/article/090907/4/e3p0.html>

SingDao news,<http://hk.news.yahoo.com/article/090901/3/e09n.html>

The Buildings Department, <http://www.bd.gov.hk/>

The Link Management Limited, <http://www.thelinkreit.com/>

Appendix A: Hong Kong Shopping Mall aged over 20 years

中西區

名稱	所屬集團	落成年份	地址
置地廣場	香港置地	1980年	中環畢打街
環球商場	會德豐地產有限公司 香港鐵路有限公司	1980年	中環德輔道中
交易廣場	香港置地	1985年	中環康樂廣場
新世界大廈	新世界發展有限公司	1977年	中環皇后大道中
信德中心	信德集團有限公司	1985年	上環干諾道中
怡景花園商場	信德集團有限公司	1987年	西環皇后大道西
新聯邦大樓商場	會德豐地產有限公司	1972年	堅尼地城卑路乍街
均益大廈	均益有限公司	1970年代	德輔道西
創業商場	廖創興企業有限公司	1990年	西環德輔道西
偉利商場		1982年	中環皇后大道中
中源中心商場		1980年	中環皇后大道中
歷山大廈	香港置地	1976年	中環遮打道
太子大廈	香港置地	1965年	中環遮打道
香港文華東方酒店商場	香港置地	1963年	中環干諾道中
和記大廈	和記黃埔	1974年	中環夏慤道
力寶中心	力寶集團	1987年	金鐘金鐘道
美國銀行中心	香港置地	1975年	金鐘夏慤道
統一中心	世界發展有限公司	1981年	金鐘金鐘道
遠東金融中心	信和置業有限公司	1982年	金鐘夏慤道
翡翠閣商場		1981年	堅尼地城堅彌地城海

			旁
永安中心	永安國際有限公司	1977 年	上環德輔道中
陸海通大廈	陸海通有限公司	1958 年	中環皇后大道中 中環戲院里

灣仔區

名稱	所屬集團	落成年份	地址
禮頓中心	希慎興業有限公司	1977 年	銅鑼灣禮頓道
希慎道壹號	希慎興業有限公司	1976 年	銅鑼灣希慎道
新寧大廈	希慎興業有限公司	1982 年	銅鑼灣希慎道
恆隆中心	恆隆地產有限公司	1975 年	銅鑼灣百德新街
皇室堡	華人置業集團	1979 年	銅鑼灣告士打道皇室大廈
名珠城	新世界發展有限公司	1970 年	銅鑼灣百德新街
東角 Laforet	華人置業集團	1972 年	銅鑼灣東角道
銅鑼灣地帶	華人置業集團	1966 年	銅鑼灣怡和街
電業城	裕景興業有限公司	1990 年代	銅鑼灣軒尼詩道
優食橫町	華潤創業有限公司	1960 年	銅鑼灣軒尼詩道
銅鑼坊	私人物業	1966 年	銅鑼灣謝斐道
海港中心商場	新鴻基地產	1983 年	灣仔港灣道
新鴻基中心商場	新鴻基地產	1982 年	灣仔港灣道
合和中心	合和實業有限公司	1980 年	灣仔皇后大道東
華潤大廈商場	華潤創業有限公司	1983 年	灣仔港灣道
灣仔電腦城	華人置業集團	1988 年	灣仔軒尼詩道
東方 188 商場		1976 年	灣仔灣仔道
298 電腦特區		1976 年	灣仔軒尼詩道
東角中心		1985 年	銅鑼灣軒尼詩道
鷹君中心	鷹君集團	1983 年	灣仔港灣道
伊利莎伯大廈商場	長江實業有限公司 新鴻基地產	1978 年	銅鑼灣謝斐道

維多利中心商場	新鴻基地產	1981年	天后屈臣道
灣景商場		1966年	銅鑼灣高士威道
前線觸覺		1975年	銅鑼灣告士打道柏寧酒店
銀座商場		1964年	銅鑼灣景隆街

東區

名稱	所屬集團	落成年份	地址
興民商場	領匯房地產投資信託基金	1982年	柴灣興民邨
小西灣商場	領匯房地產投資信託基金	1989年	小西灣小西灣邨
環翠商場	領匯房地產投資信託基金	1979年	柴灣環翠邨
康怡廣場	香港鐵路有限公司 恆隆地產有限公司 新世界發展有限公司	1986年	鯉魚涌康山
太古城中心	太古地產有限公司	1982年	太古城太古城道
永利中心		1982年	柴灣柴灣道
太安樓	香港置地	1968年	西灣河筲箕灣道
僑冠大廈商場		1966年	北角英皇道與糖水道交界
北角城中心	鷹君集團	1984年	北角英皇道
新時代廣場			北角英皇道
七海商場		1979年	炮台山英皇道

南區

名稱	所屬集團	落成年份	地址
----	------	------	----

華富商場	香港房屋委員會	1978 年	薄扶林華富邨
利東商場	領匯房地產投資信託基金	1988 年	鴨脷洲利東邨
利港商場	新鴻基地產	1989 年	香港仔成都道
置富南區廣場	新鴻基地產	1981 年	薄扶林置富花園
香港仔中心商場	和記黃埔有限公司	1979 年	香港仔香港仔大道
數碼天地	和記黃埔有限公司	1979 年	香港仔南寧街
利群商場	新鴻基地產	1983 年	香港仔香港仔大道
珍寶商場		1988 年	香港仔香港仔大道

Appendix B: Renovation Project: Fu Tung Plaza

Fu Tung Shopping Center (FTSC) was completed in 1997. It is located in Tung Chung and close to the MTRC Tung Chung Station. It has an area of close to 100,000 square feet and is comprised of a 2-storey retail building. There are 500 parking spaces in the center.

Mr. Look was the project manager of the Link Management in charge of the renovation project in Fu Tung Shopping Center (FTSC). As he mentioned, FTSC was a property with very low shopper flow prior to 2007, even on weekends. The owner, however, does envision that FTSC has a potential of growing into a popular shopping center with it situated in an enviable location surrounded by public and private residential estates. The owner believes that an improved FTSC was needed to meet the demands of the growing population in Tung Chung. As such, FTSC was one of the company's shopping centers to undergo a renovation in the late 2007.

The major changes made to FTSC were:

1. There was new façade treatment. Attractive promotional boards were hoisted in the exterior to enhance the overall image of the center. According to Mr. Look, the exterior look of every shopping center is vital as it governs the first impression. An outdated look may discourage shoppers to come. Therefore, it is common to find renovated centers retrofitted with a modern look. Photo 1 and Photo 2 below show the façade before and after renovation.



Photo 1: Outlook of FTSC
before renovation



Photo 2: Outlook of FTSC after
renovation

2. Bright and eye-catching lighting was added. Its purpose was to make the newly introduced retailers more visible to the mall visitors. Mr. Look believed that lighting in an enclosed environment had a direct effect on the mood of the shoppers; visitors would feel more happy and pleasant with some special lighting effects. Photo 3 shows the new lighting effect.



Photo 3: New lighting effect in FTSC

3. New tenants were planned for the renovation. Mr. Look believed that food and beverage was the anchor trade in the center. They served as the magnet for shoppers. After the renovation, restaurants such as Beppu, Ekimae and Café De Coral were brought to the mall as these tenants, like many other chain stores, would refuse to go into a mall unless its look was enhanced. Hence, renovation is a means to draw those tenants.

4. The hygiene and the cleanliness of the washrooms were improved. Mr. Look's experience told him that a dirty and unhygienic washroom definitely sends shoppers 'out of the door'. When visitors find the washrooms dirty, they would likely not come back to the mall. Or, they would leave the mall immediately once they come out of the washroom. Large signs were put in place for people to find the washrooms. The entrance to the washrooms had been made doorless and hence more hygienic. Washroom facilities were also frequently checked out and cleaned by their staff.



Photo 4: Washroom in FTSC before renovation



Photo 5: Renovated washroom in FTSC

Appendix C: Renovation Project: Lung Cheung Mall

Lung Cheung Mall (LCM) was completed in 2001. It is located in Wong Tai Sin and adjacent to the Wong Tai Sin MTRC Station. It has an area of appropriately 270,000 square feet and is comprised of a 2-storey retail building. About 570 parking spaces are present in the center.

Ms. Chu, assistant project manager of The Link Management, was in charge of the renovation of Lung Cheung Mall. According to Ms. Chu, LCM is one of The Link's key shopping centers. It was renovated because of its prime location. The Link identified that the center should be able to attract more shoppers after renovation. In the planning stage of the LCM's renovation project, the enhancements were carefully planned to ensure that shoppers' needs were met. LCM was renovated two years ago. The changes are described below.

1. The mall traffic in LCM was extremely low before the renovation as described by Ms. Chu. In order to draw more customers to the center, the outer wall of the center (Photo 6) was replaced by glass doors (Photo 7) to create a throughway between the shopping center and the passengers' drop-off point which stands next to the former wall. Building residents, on their way home, would usually drop in the shopping center with this added convenience. The residents, while waiting for their cars to pick them up, would also likely wait inside the air-conditioned mall. This increased the flow of people to the mall, and hence generated more

potential business for the retailers.



Photo 6: Wall before renovation Photo 7: Wall transformed to entrance

2. New tenants are planned for the renovation. Shops that sell similar products or services were put in a cluster to facilitate shopping. Ms. Chu indicated that most shoppers were drawn to the center for the purpose of dining. The eateries were the anchor tenants in the mall. After the renovation, restaurants in addition to other trade mix were introduced to the mall to increase the people traffic.

3. The lighting of LCM before renovation was not bright enough. The atrium area has no shops. The renovation brought more bright and colourful lighting to the mall. In addition, a coffee shop was introduced to the atrium. This renovated atrium soon became a rendezvous for the consumers. The traffic flow in the mall increased.



Photo 8: Passageway of LCM before renovation



Photo 9: Passageway of LCM after renovation

4. Promotional functions in LCM were held after renovation was completed. On the day of completion, the director of The Link and other guests were invited to the center to celebrate the success of the renovation. Free parking was given away to encourage consumers to spend in the center. In festive seasons like Christmas and Mid-Autumn festival, different promotional events were held in the center to attract people to the center.



Photo9: Christmas's celebration



Photo 10: Mid-Autumn Festival

Appendix D: Renovation Project: Hau Tak Shopping Center (HTSC)

Hau Tak Shopping Center (HTSC) was completed in 1993. It is located in Tseung Kwun O, adjacent to the MTRC Hang Hau Station. It has an area of appropriately 320,000 square feet and is comprised of a 2-storey retail building. More than 620 parking spaces are present in the center.

Ms. Chu, project manager of the Lung Cheung Mall renovation, was also the project manager in charge of the renovation of Hak Tak Shopping Center. She described the strategy of renovating HTSC was similar to that of LCM. Both projects aimed to draw customers. The HTSC renovation targets people coming out of the MTRC station and the neighbouring developments. Both centers were of low utilization prior to renovation. HTSC was thus enhanced as follows:

1. The passageway connecting HTSC to the MTRC station was originally a quiet corridor. To Ms. Chu, that passageway was a key path to draw customers to the center. Hence, the passageway was transformed into a brightly-lit air-conditioned footbridge with a coffee shop in the middle to give the visitors a more pleasant and comfortable link to the center. After the renovation, many more customers were drawn to the center.



Photo9: Passageway in HTSC before renovation



Photo 10: Renovated passageway in HTSC

2. The lighting in HTSC was dim. Natural lighting and more lighting were added in the atrium to modernize the look of the mall.

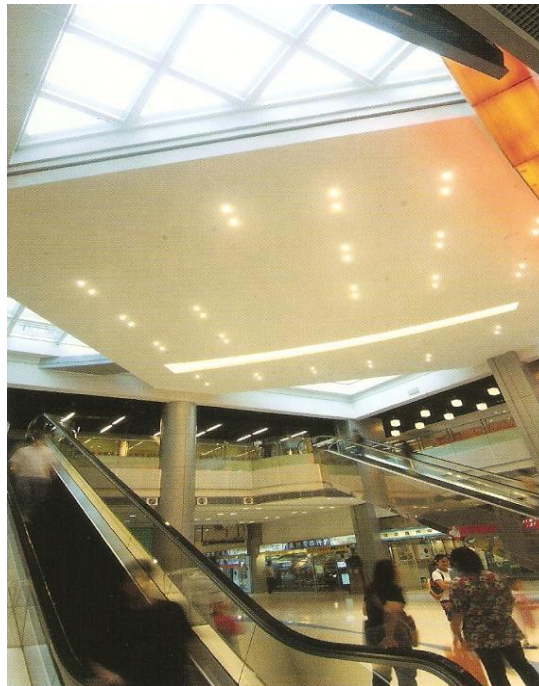


Photo 11: Renovated atrium's ceiling in HTSC

3. To improve the visibility of the shops to the visitors, Ms. Chu planned for a change in the balustrades from the existing obsolete glass blocks to sheet glass. The atrium ceiling was also changed to allow more natural light to come through. Both these changes bring the look of the mall to be at par with other sterling name malls.



Photo 12: Balustrades in HTSC before renovation



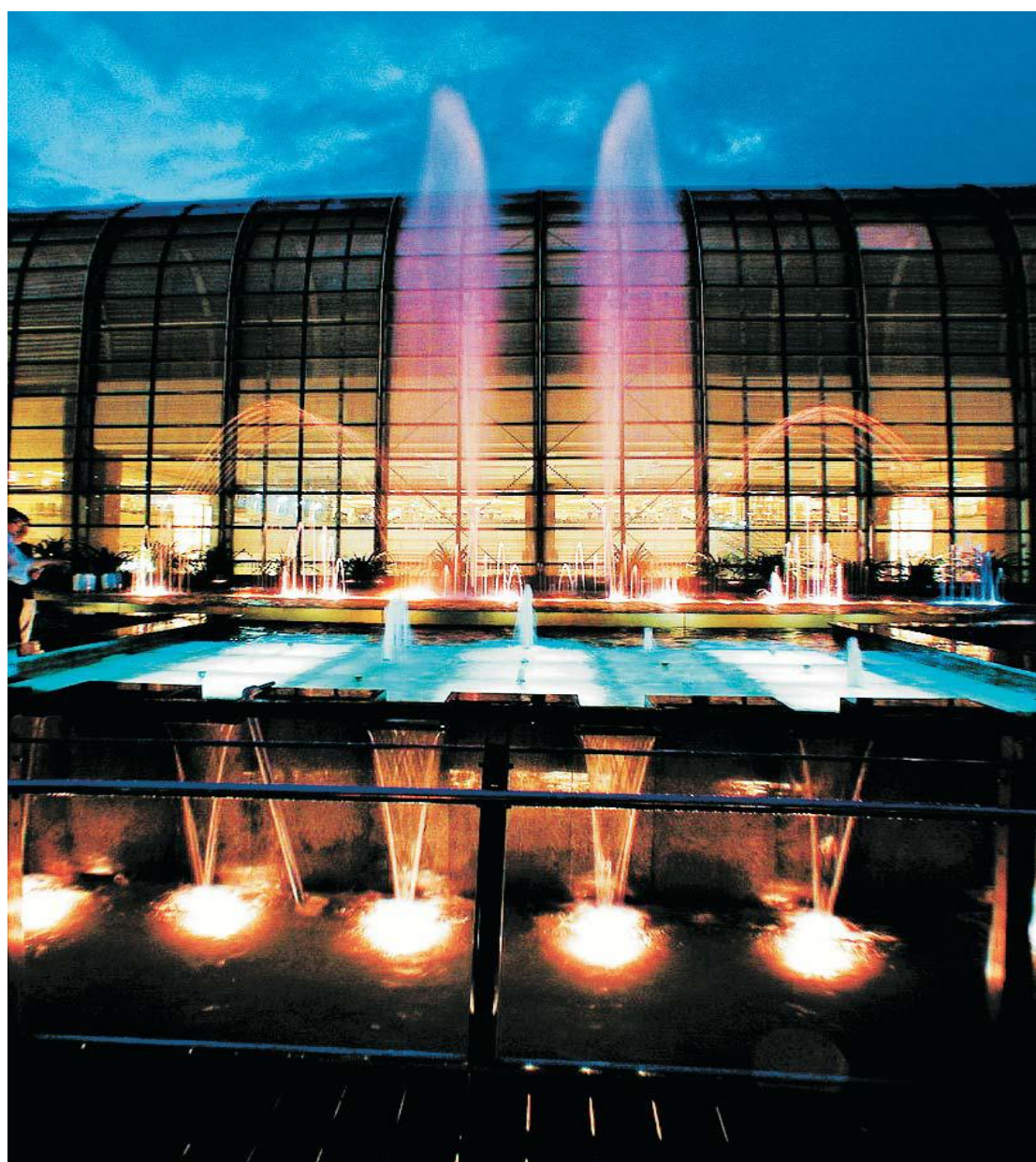
Photo 12: New glass balustrade in HTSC after renovation

4. The renovation also planned for the introduction of more tenants to the mall. Many of the tenants introduced after the renovation were restaurants and food outlets which offer quality dining, creating more choices for consumers and hence attract them to the centers.

Appendix E: Renovated shopping center-New Town Plaza

新地季刊 * 二〇〇五年第四季 SHKP QUARTERLY 4th quarter 2005 音樂噴泉
被視為新城市廣場的標誌，翻新工程後已遷往花園平台，與全新配套設施結合，
創出另一新形象。

The landmark musical fountain has been renovated and relocated to the podium garden to blend in with other new facilities giving a completely new look at New Town Plaza in Shatin.



納客戶各種的意見，包括洗手間的設施，甚至是節日佈置，瞭解所需，以便作出相應的配套設施。例如翻新後的商場增建了22條扶手電梯貫通商場各樓層，完全

是針對顧客希望能在最短時間到達目的地的訴求。

客戶服務殷勤親切

集團一方面投放大量資源改善商場的硬件，同時亦積極精進輔助軟件配合。商場的顧客服務中心特設有親客大使，為顧客提供親切的貼身服務，包括物品暫託及提供嬰兒車、輪椅、雨具及熱水等服務，務求讓到訪顧客有賓至如歸感覺。

新形象助提升租金收益

集團租務部總經理林家強指出，集團為應付消費者不斷改變的口味，故採取定期翻新旗下商場及調整租戶組合政策，以提升商場的吸引力。新城市廣場自1984年開業以來，遊人如鯽，一直是集團的旗艦商場，為配合該區不斷提升之消費力及對生活質素之要求，集團斥資3億港元進行全面翻新工程，預計新城市廣場經翻新後重新定位，將進一步加強其吸引力，鞏固其在市場的領導地位。他補充，待工程完成後預計將有約60%是新租戶，嶄新租戶組合除令遊人耳目一新，預料將可為商場帶來租金收益增長。

重組商戶產品分層別類

新城市廣場商場翻新工程共分兩個階段進行，首階段工程的規劃涉及面積達600,000平方呎，以分層歸類方式將300多個商戶重新組合，將同類的安排在同一樓層，例如：7樓是特色食肆及露天花園，被視為該商場標誌的音樂噴泉，隨著翻新工程完成後亦遷往露天花園。6樓集合各式數碼影音家電產品、5樓為世界各地運動服飾及用品總匯、3及4樓提供歐、美、日時裝品牌及化妝美容用品的最新產品，成為上班仕女必到之處、2樓則集中從4樓遷來的旅行社及大型生活專門店 city'super，而1樓屬於風味食肆及娛樂天地，以上安排方便遊人尋找所需產品及服務，而新加入的租戶有不少是業內翹楚。例如：i.t., D-mop, Folli Follie, Nautica, Mango, United Colors of Benetton。第一階段剛完成，而第二階段將集中在1樓及3樓進行工程，預算將於明年下半年完工。

悉心策劃聽取客戶意見

林家強補充，為確保翻新後商場仍繼續保持領導地位，在策劃整體翻新工程前，特別進行不同形式的客戶意見調查，歸港旅遊業持續蓬勃，零售業日趨興旺，集團為提升沙田新城市廣場的競爭力，鞏固在市場的領導地位，特斥資3億港元進行全面翻新工程，首階段工程剛完成，第二階段預期將於明年竣工。

Appendix F: Renovated shopping center -Tai Po Mega Mall

新地季刊 * 二〇〇六年第一季 SHKP QUARTERLY 1st quarter 2006

成功定位區域性商場

新鴻基地產代理總經理(租務)馮秀炎表示，集團經常檢視商場的營運發展，並會定期透過不同規模的粉飾工程來增強競爭力。1995年大埔超級城銳意將商場重新定位為區域性商場，目標顧客更擴闊至整個新界東北區。面積約600,000平方呎的大埔超級城將於2006年再度進行大規模的翻新工程，務求營造全面革新的購物環境，為顧客帶來煥然一新的購物樂趣，並進一步刺激人流，加上受惠於零售市場的良好氣氛，預期翻新後商場的租金可獲雙位數字增長，亦為租戶帶來理想的營業額。



締造舒適購物環境

大埔超級城翻新工程，是透過燈光效果及富現代感的設計，以增添商場的空間感，令商場形象更突出；連接商場各區的行人天橋已完成加裝冷氣和照明系統，讓顧客在更舒適的環境下消閑購物。此外，全面裝修洗手間及嬰兒護理間，並特設電子儲物櫃，方便顧客存放物件。其他新增設施包括大型 LED 電視屏幕及多

部等離子電視，傳遞更多及更新的資訊。匯聚特色食肆及潮流品牌為配合整體商場發展，大埔超級城同時透過重組商戶，匯聚不同種類的產品和品牌以吸引消費者。商場共有超過 150 間商舖，包括逾 90,000 平方呎的吉之島百貨及引進了多間特色食肆，如全港首間迎囍大酒樓便率先進駐大埔超級城，其他如和民居食屋、味千拉麵、Double Star Café、面包新語麵包店、ans、ceui、Royal Sporting House，也選擇在該商場開設新界東北區的首間分店。其他新進駐的品牌有 <http://www.wizze.com>、b+ab、Esprit、Bauhaus、Arnold Palmer Junior 等。未

來商場將進一步增添潮流食肆、影視娛樂及化妝品類別的商戶，務求帶給顧客更多元化的購物選擇。多姿多采推廣活動

此外，商場亦透過多元化的推廣活動刺激人流，如去年底舉辦別開生面的「聖誕格蘭披治動感賽車場」，再加上多元化的聖誕活動，因此大埔超級城在聖誕節期間，整體人流較平日增加三成。另一方面，商場經常邀請本地及國際紅星、偶像派歌手等到場作表演活動及舉行簽唱會；同時亦加強各種不同類型的推廣活動，如邀請健力士世界紀錄保持者及世界級表演團體首次來港演出，還有多元化推廣活動及嘉年華會等，增添商場熱鬧的氣氛。

翻新旗下商場是集團經營商場業務的重要策略之一，故最近斥資逾4,000萬港元全面翻新大埔超級城整體商場外貌，工程於本年首季展開，預計將於年底完成。為配合整體營運策略，商場同時透過重組商戶提升競爭力，並已引入多個著名品牌的商戶，以鞏固作為新界東北區最大型消閑購物商場的領導地位。

Appendix G: Renovated shopping center -Landmark North

2nd quarter 2007 SHKP QUARTERLY 19

Landmark North draws a large number of mainland customers with its prime location along the railway. The Group is upgrading the mall and tenant mix to create an even more favourable business environment and increase its appeal to mainland customers. The yearlong renovation will be done in April 2008, consolidating Landmark North's position as the number one mall in the area.

Prime site near the border

Sun Hung Kai Real Estate Agency Deputy General Manager – Leasing Fiona Chung said that Landmark North has seen an influx of mainland customers since the Individual Visit Scheme began in July 2003. Ms Chung said that the mall is near the Sheung Shui KCR station, just one stop from the Lowu checkpoint. As well as a rail connection, the mall is served by various bus and minibus routes linking different parts of Hong Kong. A cross-border bus station beneath the mall provides convenient transportation to and from China via the Man Kam To checkpoint.

More mainland customers

The mall has seen increasing patronage by mainland visitors. "Apart from locals, the mall has been particularly favoured by mainland customers. Our new programme will offer an even better shopping experience," said Ms Chung. She said that about a third of the mall's patrons are mainlanders, and that sales in Year 2006 climbed 20% over Year 2005, with growing numbers of high-spending mainlanders. Average crowds number 90,000 on weekdays and 110,000 on weekends.

Fresh natural look

Work started in April, with the first phase involving renovations to the washrooms, sub-division of Level 5 into a number of shops to accommodate more trade varieties and refurbishment of the facade by the footbridge on Level 2. The renovations will give the mall's common area a nature theme, offering a fresh look and comfortable shopping environment. A proposal to turn some of the office floors into retail space is also being studied, said Ms Chung, as part of the plan to capitalize on the demand for shopping in the

district.

Changing tenant mix

The mall will seek more tenants in fashions, jewellery, cosmetics and electronic products, which are favourites with mainland customers. The renovations will give each floor specific focus: fashions, jewelry, sports, cosmetics and accessories on levels 2 and 3, electrical appliances and health care products on level 4, and specialty restaurants, cafes and travel agencies on level 5. About ten new outlets will be added on level 5.

The mall has been holding major promotions to draw more visitors. A bian nian (face change) show and the New Year countdown each drew over 160,000 people last year. The mall will continue to host major shows to attract visitors.



露天茶座將是商場翻新後增添的設施，令本地及內地高消費旅客在購物之餘可享受悠閒。

A new alfresco dining area after the facelift will offer relaxation for high-spending local and mainland customers.



定期邀請名人進行宣傳活動，以增加商場吸引力，刺激人流。

Celebrities take part in regular promotions to boost traffic in the mall.

Appendix H: Renovated shopping center- Tsuen Wan Plaza



全新打造的荃灣廣場迎合年輕家庭消費群的需要，提供一站式消閑購物娛樂。

The newlook Tsuen Wan Plaza offers one-stop shopping and entertainment to suit young couples.

The first phase of the HK\$300-million upgrade of the Group's Tsuen Wan Plaza was completed early this year and the second phase will be done by the end of the year. The renovations will reposition the 583,000-squarefoot mall as the main draw in western Tsuen Wan offering one-stop shopping and dining.

Focus on young couples

The focal point of Tsuen Wan has gradually shifted westward with the development of new transport and housing estates. Tsuen Wan Plaza is near the West Rail and the biggest mall in the area, and it is expected to draw more young couples with its new look and refreshing tenant mix.

The first phase renovations allotted 20% more floor area to both fashions and food and beverages. Tenants include a Jusco department store, specialty restaurants and a four-screen Broadway Cinema. There is also a 23,000-square-foot outdoor children's playground. The upgraded mall is expected to draw young couples from Tsuen Wan, Kwai Chung, Tsing Yi and

Castle Peak Road.

Brand new restaurant zone

The renovations created a special restaurant zone with full-length windows that let in plenty of natural light and allow diners to enjoy the scenery outside. Sun Hung Kai Real Estate Agency General Manager – Leasing Henry Lam said, “The new restaurant zone makes our F&B mix even better, occupying 25% of the mall.” There are now nearly 20 restaurants including Red Ant, Deli Viet, Cafe Lagoon, Mian Cafe, Olivia Ristorante, Charlie Brown Cafe, Cafe Gute and more. The new restaurants that opened since the renovations have generated more F&B business and raised turnover per square foot by 40% compared to a year ago.

Second phase complete by year end

The second phase of renovations began recently. A new skylight and re-designed entrance will brighten up the mall, while the first-floor musical fountain will be replaced by a giant video screen showing mall promotions. The escalators will be upgraded to cope with more visitors. When the second phase renovations are done at year end, the number of tenants will increase from 130 to 170, making the mall the biggest one-stop shopping and entertainment hub in western Tsuen Wan.

Appendix I: Renovated shopping center-Windsor House

皇室堡商場拆細租金倍升

<http://paper.wenweipo.com> [2007-11-13]



■華人置業集團高級租務經理伍經緯介紹皇室堡商場翻新工程。本報記者梁悅琴攝

【本報訊】(記者 梁悅琴)因應市場的轉變及提升租金收入，華人置業於銅鑼灣旗艦商場皇室堡今年斥資4億元把當中一半約20萬呎商場分2期合共3年進行翻新，商戶組合由以往的超市及百貨拆細為小型「潮舖」，營業時間亦由晚上9時延長至凌晨12時，1期剛完成，2期預計於2009年內完成，呎租因而至少提升1倍，人流料增長30%，整體生意額升幅達20%至40%。其中首期地庫至1樓合共10萬呎樓面剛於今年9月完成翻新工程，涉資1.5億元。

地庫大變身 70 個潮舖

華人置業集團高級租務經理伍經緯指出，樓高39層的皇室大廈，包括22層約41萬呎的寫字樓，及17層約41萬呎的商場「皇室堡」。今次進行翻新的20萬呎商場樓面，首期位於地庫至1樓，約10萬呎，其中地庫變身為70間小型「潮舖」，面積介乎300至400呎，以售賣本地一型格設計師創意為主貨品，80%為時裝，20%為食肆，並加設一對扶手電梯從記利佐治街直達，地下至1樓的商戶數目亦由12間大增至122間，面積介乎600呎至1000呎。他指出，1期翻新的10萬呎樓面已全部租出，呎租介乎150至200元，最高呎租達300元，屬時裝及美容行業，比翻新前升1至3倍。

翻新後租金升1至3倍

他指出，1期翻新後，過去2個月皇室堡的營業額相當理想，其中人流升30%至10萬人次一日，食肆營業額達400元一呎，美容及珠寶店的營業額達800至1000元一呎，比翻新前升20%至40%。

至於第2期翻新工程，包括2至4樓，樓面約10萬呎，預計於2008年初展開，09年完成，涉資2.5億元，商場的地下至4樓中庭打通，並引入自然光線，面向維園的石屎外牆改建成玻璃幕牆，引入特色食肆，並會有10多間雙層舖位以引入國際品牌時裝店，剛開始預租，呎租介乎250至300元。當中原本於3樓的玩

具反斗城會搬至 7 樓，樓面由 3 萬呎減至 1.4 萬呎，但呎租會提升。

全商場 5 成時裝 3 成美容

他指出，整個皇室堡商場完成翻新工程後，50%租戶為時裝店、30%為美容，另外現時已有的租戶如中式酒樓、戲院、卡拉 OK 仍在，會令人流持續增長。他稱，除底租外，此商場亦有營業額分成制度，其中食肆為 8%至 12%、時裝為 15%至 18%、珠寶為 5%至 8%，美容為 5%至 8%。

另外，配合聖誕節來臨，今年皇室堡投資 600 萬元推廣，比 2 年前(去年正裝修中)增加 1 倍，由 11 月 24 日起會有 8 棵以最潮 Futuristic 為設計藍本的聖誕樹矗立於場內，設計師包括本地藝人如林峰、劉心悠、德國藝術家 Andy Maluche，以及華置高級租務經理伍經緯及租務經理歐陽詠心，預期人流會增長 30%。

Appendix J: Renovated shopping center- Kingswood Ginza

嘉湖銀座 2000 萬翻新

2007-11-21

長實(001)旗下的天水圍栢慧豪園將於明年入伙，發展商提升物業價值，亦不忘做好物業的配套。長實租務部副首席經理黃思行表示，集團將斥 2000 萬元作為天水圍的嘉湖銀座商場進行翻新工程。

黃思行表示，嘉湖銀座商場的翻新工程將於明年一月開始，料於三月完成，集團計劃斥 2000 萬元把 3 萬平方呎的樓面間細為 20 至 30 間商舖，目前集團正為商舖預租，平均呎租處於 20 至 60 元，目前已收到近 100 個查詢。她補充說，受惠於零售市道暢旺，今年嘉湖銀座續租的租金有雙位數字的增長。

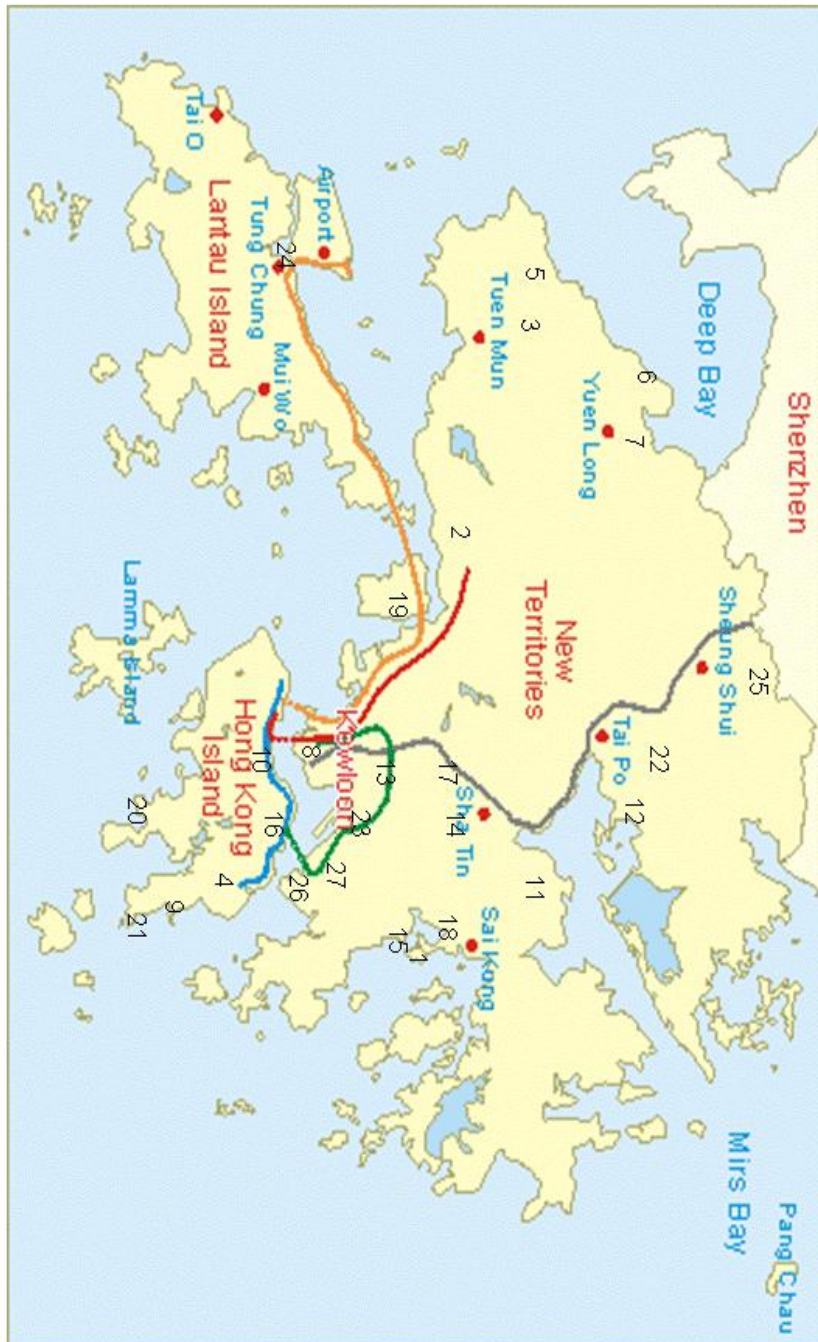
黃思行又指，旗下剛完成翻新及租戶重組的屯門華都商場，翻新後商場整體租金收入有高達 3 倍增長，目前商場整體平均呎租處於 30 至 200 元水平。

華都商場第二期的翻新工程亦將於明年農曆新年後展開，計劃把 2 萬平方呎樓面間細為 8 至 10 間商舖。

另外，長實及致富產業旗下的 13 個商場，共斥 1000 萬元作為聖誕的宣傳費用，較去年上升 15 至 20%。黃思行預期，聖誕期間旗下商場的人流及營業額較平日均可有 15 至 20% 的增長。

九倉(004)旗下鑽石山荷里活廣場今年聖誕節宣傳費達 450 萬元，較去年增加 20%，預期十二月份人流超過 250 萬人次，營業額逾 2.3 億元，分別增長約 15% 及 16%。

Appendix K: Location Map of 27 shopping centers



Appendix L: Background information of the samples

Shopping center	Location	Age	GFA(sq.ft)	No. of Tenants as at 11/2/2010	Renovation period
1	Tseung Kwun O	11	6600	21	Sep 2006- Nov 2009
2	Tsuen Wan/Kwai Chung	15	9400	29	Mar 2008- Mar 2009
3	Tuen Mun	27	28400	72	Oct 2007- Mar 2009
4	Hong Kong East	10	12400	18	Apr 2009- Nov 2009
5	Tuen Mun	22	35800	66	Sep 2006- Aug 2009
6	Tin Shui Wai	18	16200	49	Mar 2007- Dec 2008
7	Tin Shui Wai	11	36700	120	Sep 2008- Nov 2009
8	Kowloon Central	35	26000	58	Oct 2007- Nov 2009
9	Hong Kong East	31	13800	22	Aug 2008- Dec 2009
10	Causeway Bay	31	410000	62	July 2006- Dec 2006
11	Ma On Shan	14	13600	25	Oct 2006- Feb 2008
12	Tai Po	25	600000	160	Apr 2006- Dec 2006
13	Kowloon North	27	63000	66	Aug 2006- June 2007
14	Shatin	34	16600	22	Mar 2007- Dec 2008
15	Tseung Kwun O	9	12200	71	Apr 2007- Jan 2008
16	Causeway Bay	15	280000	80	Apr 2007- Apr 2009
17	Shatin	33	27900	69	May 2007- June 2009
18	Tseug Kwun O	17	29500	90	Sep 2005- Dec 2007
19	Tsing Yi	21	28300	68	Oct 2006- Sep 2008
20	Hong Kong South	10	18100	21	Aug 2006- May 2009
21	Hong Kong East	21	16800	21	Oct 2007- Dec 2009
22	Tai Po	21	23000	55	Jan 2007- Dec 2008
23	Kowloon North	13	36700	89	Aug 2005- May 2005
24	Tung Chung	13	16600	50	Nov 2007- Dec 2008
25	Sheung Shui	15	180000	84	Apr 2007- Apr 2008
26	Kowloon North	9	25350	78	Nov 2005- June 2007
27	Kowloon North	27	24900	126	Aug 2006- Mar 2009

Appendix M: News: Renovation of Wong Tai Sin Shopping Center

黃大仙中心翻新 領匯指人流倍增



(明報)2009年12月4日 星期五 05:10

【明報專訊】領匯 花 1.5 億元翻新黃大仙 中心和龍翔廣場，聲稱單是前者的人流已增加一倍至每日平均 10 萬人次，商店數目由 100 間增至 126 間，但當中只有 37 間為舖面面積少於 1000 呎的小商戶，佔不足三分之一，領匯亦拒絕透露加租幅度。

領匯翻新工程包括加建貫穿黃大仙中心和龍翔廣場的行人天橋等。領匯租務主管黃林惠貞表示，翻新後的租金有所提升，較全港領匯商場租金平均每呎 29.7 元略高，她強調呎租已較同區私人商場低約 10 元，但未有正式統計翻新前的租金。

黃林惠貞又說，黃大仙中心今年 10 月錄得每日人流平均約 10 萬人次，較翻新前增加一倍，留下續租的小商戶有 37 間，但未有統計翻新前有多少小商戶，又指租戶各有遷出原因，領匯並無迫走租戶的政策。

由領匯安排接受訪問的「明髮廊」自 86 年在黃大仙中心經營，負責人陳艷芬表示，該店花了 80 萬元裝修，配合商場翻新工程，而租金增加了一成，但人流上升兩成，認為加租可以接受。

團體：必瘋狂加租 小商戶受壓

全港公屋商戶總會主席陳永成批評，領匯以巨資翻新商場，例必瘋狂加租，迫走部分小商戶之餘，亦逼商戶加價以抵消成本，但領匯商場以服務區內公屋居民為主，居民消費能力有限，最終難以負擔物價上升，商戶生意必受影響。

Appendix N: Formal Letter requesting data on mall traffic

Dear Sir/Madam,

Request for information Data on mall traffic of renovated shopping centers

I am a full-time final year student in the Surveying faculty, the Department of Real Estate and Construction at the University of Hong Kong. I am working on my Bachelor of Science final year dissertation titled "Renovation of shopping center in Hong Kong". It is a study on the relationship between mall traffic of a shopping center and its renovation.

The objective of my dissertation is to validate if the mall traffic does increase after the renovation of a shopping center. To complete my study, I would require data to support my discussion and argument. As such, I would like to seek your help in providing me with data, should there be any, your company has collected on mall traffic. I understand that such data is highly confidential. I will sign a Letter of Confidentiality, where required, to keep the data private and use them for my dissertation only. Your data would be most invaluable for my dissertation.

Thank you in advance for your help. I look forward to your response.

Should you require more information, please do not hesitate to contact me at 6025-7272.

Thanks again.

Yours faithfully,
(signed)

CHEUK Sui Hung, Heidi

Appendix O: Interview Questions with Project Managers

Set A

1. How many renovation projects have you dealt with?
2. What has been done in a renovation project in order to attract more shoppers? Please answer with support to some renovated shopping centers.

Set B

1. How many renovation projects have you dealt with?
2. Have you dealt with some cases that the mall traffic of shopping center increase insignificantly or even decrease after renovation? If yes, what do you think are the reasons behind?