

**BRANDS AND FACTORS AFFECTING SERVICED APARTMENT
RENTAL RATE:
A CASE OF SERVICED APARTMENT IN BANGKOK**

PAKPOOM VIPASSAPAN

**A THEMATIC PAPER SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION
(BUSINESS MODELING AND ANALYSIS)
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY
2010**

COPYRIGHT OF MAHIDOL UNIVERSITY

Thematic Paper
entitled
**BRANDS AND FACTORS AFFECTING SERVICED APARTMENT
RENTAL RATE:
A CASE OF SERVICED APARTMENT IN BANGKOK**

.....
Mr. Pakpoom Vipassapan
Candidate

.....
Asst. Prof. Yingyot Chiaravutthi, Ph.D.
Major-advisor

.....
Ms. Malinvisa Sakdiyakorn, Ph.D.
Co-advisor

.....
Prof. Banchong Mahaisavariya,
M.D., Dip Thai Board of Orthopedics
Dean
Faculty of Graduate Studies
Mahidol University

.....
Asst. Prof. Yingyot Chiaravutthi, Ph.D.
Program Director
Master of Business Administration
Program in Business Modeling and
Analysis
International College
Mahidol University

Thematic Paper
entitled
**BRANDS AND FACTORS AFFECTING SERVICED APARTMENT
RENTAL RATE:
A CASE OF SERVICED APARTMENT IN BANGKOK**

was submitted to the Faculty of Graduate Studies, Mahidol University
for the degree of Master of Business Administration
(Business Modeling and Analysis)

on
November 27, 2010

.....
Mr. Pakpoom Vipassapan
Candidate

.....
Asst. Prof. Sittisak Leelahanon, Ph.D.
Chair

.....
Ms. Malinvisa Sakdiyakorn, Ph.D.
Member

.....
Asst. Prof. Yingyot Chiaravutthi, Ph.D.
Member

.....
Prof. Banchong Mahaisavariya,
M.D., Dip Thai Board of Orthopedics
Dean
Faculty of Graduate Studies
Mahidol University

.....
Assoc. Prof. Rassmidara Hoonsawat, Ph.D.
Dean
International College
Mahidol University

ACKNOWLEDGEMENTS

This thematic paper has been successfully completed with the great support and assistance of my major advisor, Asst. Prof. Dr. Yingyot Chiaravutthi, and my co-advisor, Dr. Malinvisa Sakdiyakorn. I wish to thank them for their kind advice and great guidance all along this research.

I also would like to thank Asst. Prof. Dr. Sittisak Leelahanon, who is the external examiner of this thematic paper defense, for his helpful suggestions in improving the research.

I would like to thank Asst. Prof. Dr. Sarayut Nathapan as founder of this MBA program, thank all my MUIC lecturers for teaching me who has no fundamental knowledge of business administration until I can apply to real life. Thank all of my batch mates, without you all, I might quit the program half way. I also would like to thank the ExxonMobil Ltd., for giving a chance and financial support. Finally, I wish to thank my family for their moral support and girlfriend who always understand and encourage me to complete my master degree with love.

Pakpoom Vipassapan

BRANDS AND FACTORS AFFECTING SERVICED APARTMENT RENTAL RATE: A CASE OF SERVICED APARTMENT IN BANGKOK

PAKPOOM VIPASSAPAN 5038713 ICMA/M

M.B.A. (BUSINESS MODELING AND ANALYSIS)

THEMATIC PAPER ADVISORY COMMITTEE : YINGYOT CHIARAVUTTHI, Ph.D. (ECONOMICS), MALINVISA SAKDIYAKORN, Ph.D. (DEVELOPMENT ADMINISTRATION)

ABSTRACT

This research aimed to study the factors which affect rental rates and measure the brand value of serviced apartments in Bangkok by applying the Hedonic Price Model. A sample of 421 rentals were gathered regarding rental rates, residence's characteristics, facilities and distance to transportation facilities (express way, BTS and MRT). 180 rentals were from 4 branded serviced apartments (Fraser, Ascott, Centre Point, Oakwood). All 421 rentals were collected from April to May of 2010 through online sources and telephone interviews. The model included 15 independent variables using rental rate as a dependent variable. Results show that unit area, numbers of bedrooms, distance to transportation, restaurant and playground were positively significant with the rate. The Fraser brand had the highest value, followed by Ascott, Centre Point and Oakwood, respectively. This assures that the brand was value added to the rental rate. This paper is not only useful to new entrants for setting pricing strategies, but existing serviced apartment entrepreneurs can also use the model to adjust rental rates appropriately in the highly competitive serviced apartment market.

**KEY WORDS: HEDONIC PRICE MODEL / BRAND VALUATION /
SERVICED APARTMENT / PRODUCT ATTRIBUTE**

30 pages

ตราสินค้าและปัจจัยที่ส่งผลต่อห้องเช่าพร้อมบริการ สำหรับกรณีศึกษาอาคารที่พักอาศัยให้เช่าพร้อมบริการในกรุงเทพมหานคร

BRANDS AND FACTORS AFFECTING SERVICED APARTMENT RENTAL RATE: A CASE OF SERVICED APARTMENT IN BANGKOK

ภาควิชา วิชาสหพันธ์ 5038713 ICMA/M

บธ.ม. (การวิเคราะห์และการสร้างตัวแบบธุรกิจ)

คณะกรรมการที่ปรึกษาสารนิพนธ์: ชัยยศ เจียรวิฑูรย์, Ph.D. (ECONOMICS), มาลินวิยา ศักดิ์นิยากร, Ph.D. (DEVELOPMENT ADMINISTRATION)

บทคัดย่อ

งานวิจัยชิ้นนี้จัดทำขึ้นเพื่อศึกษาปัจจัยที่มีผลต่อค่าเช่าและประเมินมูลค่าตราสินค้าของอาคารที่พักอาศัยให้เช่าพร้อมบริการในกรุงเทพมหานคร โดยใช้แบบจำลองราคาฮิโดนิคในการวิเคราะห์ข้อมูล ผู้วิจัยทำการรวบรวมข้อมูลค่าเช่า คุณลักษณะของห้องพักอาศัย สิ่งอำนวยความสะดวกต่างๆ ระยะทางที่ตั้งจากระบบคมนาคม ตลอดจนตราสินค้าของอาคารที่พักอาศัยให้เช่าพร้อมบริการจำนวน 421 ตัวอย่าง ในกลุ่มตัวอย่างนี้มีตัวอย่างที่มีตราสินค้าอยู่ 130 ตัวอย่างจาก 4 ตราสินค้า ได้แก่ Fraser, Ascott, Centre Point และ Oakwood เพื่อใช้ในการเปรียบเทียบตัวอย่างที่เหลือ ข้อมูลถูกรวบรวมผ่านเครือข่ายอินเทอร์เน็ตและสัมภาษณ์ทางโทรศัพท์ ในช่วงเดือนเมษายน ถึง พฤษภาคม พ.ศ. 2553 แบบจำลองราคาประกอบไปด้วยตัวแปรตาม คือ ค่าเช่า และตัวแปรอิสระ 15 ตัวแปร ผลลัพธ์ที่ได้แสดงให้เห็นว่า ตราสินค้า ขนาดพื้นที่ใช้สอย จำนวนห้องนอน ระยะทางไปยังระบบคมนาคม ร้านอาหาร และสนามเด็กเล่น มีความสำคัญต่อราคาเช่าอย่างมีนัยสำคัญทางสถิติ ตราสินค้า Fraser มีมูลค่าตราสินค้าสูงสุด รองลงมา คือ Ascott, Centre Point และ Oakwood ตามลำดับซึ่งแสดงให้เห็นว่าตราสินค้าสามารถเพิ่มมูลค่าของค่าเช่า งานวิจัยนี้นอกจากผู้ประกอบการรายใหม่ที่สามารถใช้ประโยชน์จากแบบจำลองในการกำหนดค่าเช่าในขณะเดียวกันผู้ประกอบการปัจจุบันก็สามารถใช้แบบจำลองในการปรับค่าเช่าให้เหมาะสมต่อสถานการณ์การแข่งขันที่สูงของธุรกิจประเภทนี้ต่อไป

CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
ABSTRACT (ENGLISH)	iv
ABSTRACT (THAI)	v
LIST OF TABLES	vii
LIST OF FIGURES	viii
CHAPTER I INTRODUCTION	1
1.1 Background of Thai rental property	1
1.2 Statement of the problem	5
1.3 Purpose of the study	6
1.4 Significance of the study	6
1.5 Scope of the study	7
1.6 Limitation of the study	7
1.7 Definition of term	7
CHAPTER II LITERATURE REVIEW	9
2.1 Brand	9
2.2 Brand Equity	10
2.3 Hedonic Price Model	13
CHAPTER III METHODOLOGY	18
CHAPTER IV RESULTS AND ANALYSIS	21
CHAPTER V CONCLUSIONS	24
REFERENCES	27
BIOGRAPHY	30

LIST OF TABLES

Table	Page
1.1 Number of Expatriates	2
1.2 List of four brands rental properties in Bangkok	4
2.1 Annual Ranking of the Best Global Brand 2009	11
3.1 Variables of brands and features, explanations, and descriptive statistics of detached houses	19
4.1 Results from the Hedonic Models of serviced apartment	21
4.2 Brand valuation on price premiums of serviced apartment	23

LIST OF FIGURES

Figure	Page
2.1 Five concentric zones	15

CHAPTER I

INTRODUCTION

1.1 Background of Thai Rental Property

Starting from 1960 onwards many more people had left the countryside to make a living in Bangkok. As a result, all the industries in Bangkok have been rapidly developed and have become industrializing. Presently, Bangkok is not only the capital of Thailand but also the center of economic, social, tourism, transportation and investment. Starting from the Asian investment boom 1990 and due to Bangkok's location, cost of living, development of infrastructure such as streets, highways, real estate developments and a growing economy, numerous multinational companies and headquarter corporations have been settling in the capital and the city has become a hub of South East Asia. As a result, Bangkok is widely recognized to be one of the most energetic, lively and interesting cities in Asia. Not only is this the case in Bangkok, suburban provinces have also become investments locations from Japanese, Korean and American manufacturers and traders. As a result, the demand of Thai workers increases every year. In a 2005 survey done by the UN Commission for Trade and Development (UNCTAD), Thailand was ranked as the world's third most attractive nation for foreign investment. Presently, Bangkok itself is a major business hub for the Southeast Asia region.

Due to the expansion of investment activities by both Thai and multinational companies and the growth of income, there are numerous of Thai laborers and expatriates move to Bangkok and suburban provinces. Japanese ratio is 23.29% of the total expatriates, Chinese with 8.74%, British with 8.54%, Indian with 8.08% and the other (CBRE, 2009).

Table 1.1 Number of Expatriates

Year	Bangkok	Provincial	Total
2001	35,665	15,703	51,368
2002	40,132	29,232	69,364
2003	44,166	35,415	79,581
2004	49,794	40,726	90,520
2005	55,923	45,188	101,111
2006	61,058	51,736	112,794
2007	65,651	57,252	122,903
2008	76,052	64,225	140,277
Q1 2009	77,998	65,563	143,561
Q2 2009	79,511	65,982	145,493
Q3 2009	60,167	43,672	103,839
Q4 2009*	60,353	44,769	105,122

Source: Alien Occupational Control Division, Department of Employment (2009)

Note: *As of November 2009

Bangkok continues to face serious housing shortages because of moving Thai laborers and expatriates. The house property value in Bangkok is very high due to high demand and limitation of land. People who want to stay in the central business district or inner city prefer to rent a room than buying resident property. In addition, the family structure in Bangkok has also changed from a big family structure with many generations living under one roof to a single family structure. Those without families have also chosen to live alone. People spend more time in working place. They do not only consider price factor for choosing residential properties, but they also consider how long the commute time to work and if it is convenient to get around. It is not necessary to have a large living space because there is no time for house keeping. Residents need comfort and high security. This attitude generates demand for more people to stay in condominium, apartment and serviced apartment. Although the global economic crisis year 2009, the occupancy rate of expatriate apartment is at 89.8% in quarter 4 2009.

In spite of global economic situation, Bangkok is still the center of Thailand's economy and the hub of business center in Southeast Asia. Numerous of expatriates come to work in Bangkok. As a result, the growth of expatriates has increased demand for residential rental properties. According to CBRE, in quarter 4 in 2009, the total apartment supply in the downtown area of Bangkok was 11,268 units

which increased 3.7% compare with quarter 4 in 2008. The occupancy rate dropped to 89.9% but it increased 0.1% compare with last year. The Central Lumpini area has the highest rental rate where is THB 454 per square meter per month. The rate was up 13.8% compare with last year and 10.2% from quarter 3 to quarter 4 in 2009. The total supply of serviced apartments increased 2.8% from quarter 3 to quarter 4. The occupancy rate increased from 73.6% in quarter 3 to 77.7% in quarter 4.

Sukhumvit area has the highest average occupancy rate. The average serviced apartment rental rate in downtown Bangkok decreased from THB 1,016 to THB 982 per square meter per month. Serviced apartment become interesting alternative among frequent travelers, expatriates on short-long stays or those who is finding place before staying permanently in Bangkok. Normally, it is equipped and provided to meet the resident's essential needs such as furniture, kitchen amenities, TV-stereo set, room service, 24 hour security etc. For standard facilities, they are fitness gym, pool, sauna, restaurant etc. Most of serviced apartment are located in Bangkok Downtown and business district centre such as Sukhumvit, Asok, Sathorn, Silom, Ploenchit, Chit Lom. These area also are near shopping area, MRT ,BTS skytrain and expressway. In Thailand, there are four big lead branded serviced apartments which are The Ascott Group, Centre Point, Oakwood and Frasers Hospitality.

Table 1.2 List of four brands rental properties in Bangkok

Oakwood	Fraser
Oakwood Residence Sukhumvit 18	Fraser Place Urbana Langsuan
Oakwood Residence Sukhumvit 24	Fraser Suites Sukhumvit
Oakwood Residence Thonglor	Fraser Suites Urbana Sathorn
Oakwood Residence Garden Towers Bangna	

The Ascott Group	Centre Point
Ascott Sathorn Bangkok	Centre Point Sukhumvit 10
Citadines Bangkok Sukhumvit 8	Centre Point Petchburi 15
Citadines Bangkok Sukhumvit 11	Centre Point Langsuan
Citadines Bangkok Sukhumvit 16	Centre Point Wireless Road
Citadines Bangkok Sukhumvit 23	Centre Point Ratchadamri
Somerset Park Suanplu Exclusive Residence	Centre Point Silom
Somerset Lake Point	Centre Point Saladaeng
Somerset Amar Garden	Centre Point Thonglor
Somerset Sukhumvit Thonglor	

The Ascott is worldwide service residence owner and operator where headquarter is in Singapore. The parent company is Capital Land Limited which is one of Asia's largest real estate companies. The Ascott possesses 25,000 units of three brands (Ascott, Somerset and Citadines) where locate in 22 countries through Asia Pacific, Europe and the countries of the Gulf regions.

Oakwood is a worldwide serviced apartment provider with nearly 15,000 units in 45 countries through North America, Europe, and Asia. Headquarter is based in London. Regional headquarter has been established in Singapore since 1995. Presently, the regional headquarter manages properties in India, Indonesia, Korea, Japan, China and Thailand.

Fraser is one of leading international branded serviced apartment which is managed by Frasers Hospitality Pte Limited. The company is subsidiary of Fraser and Neave Limited ("F&NL") where is headquartered in Singapore. The corporate has operated around 38 residential projects and operated 5,000 serviced residence units in 13 countries through Asia Pacific, Europe and Middle East Asia.

Centre Point is a brand of Centre Point Hospitality which is managed by the Quality Houses Public Company Limited (Q. House). Its head office is at South Sathorn road. The company operates real estate development businesses with housing, condominium projects, office buildings, hotels and serviced apartments.

According to CB Richard Ellis Research (CBRE), there are five types of residential property for rent in Bangkok.

- 1) Apartment is normally furnished with common furniture such as bed, cupboard, dressing table and most have common facilities such as access key card and car parking. For premium apartment, basic kitchen amenities, swimming pools are provided. An apartment building belongs to owner.
- 2) Serviced apartment is fully furnished and equipped standard amenities. Serviced apartment has more service and facilities than regular apartments such as laundry services, fully- equipped kitchen, swimming pool, outdoor sport yard, shuttle service, baby sitting and a coffee shop or restaurant. It offers a similar level of service to hotels but price is cheaper. Tenants can stay one night, a week, a month or a year. It has more privacy than hotels but rental rate is higher than apartments because of extra services and facilities.
- 3) Rental Condominium is similar with apartment. A condominium consists of many unit dwellings. After the units were sold to individual owners, owners has right to stay or lease to tenant. Amenities and facilities are similar with apartment.
- 4) Single Rental House is house where owner lease to tenant. An owner is responsible for the house maintenance. The rental house is suitable for expatriates who come with family and have long-term work contract.
- 5) Townhouse has more than one floor with a terraced configuration. It consists of several adjacent where each of them has a garage and may have small garden at rear side.

1.2 Statement of the Problem

To serve the high demand for premium residence, serviced apartment is an interesting investment. To make business successfully, price strategy is also one of the success key. There are many factors to effect rental price such as residence's characteristics, location, environment and implicit variables. The most difficult factor

to use is implicit variables. One of them is brand. The measurement of brand value is not clear yet. Most researchers use factors which exclude brand to value the rental price. This may decrease accuracy of rental calculation.

1.3 Purposes of the Study

- 1.3.1 To study factors and characteristics which affect rental price.
- 1.3.2 To test whether “Brand equity variable” improves the accuracy of rental model.
- 1.3.3 To quantify brand value of serviced apartment.
- 1.3.4 To apply and develop the hedonic pricing model to determine rental price.
- 1.3.5 To evaluate the relation between observed factors and rental price.

1.4 Significance of the Study

Fully furnished Accommodation with flexible staying contract become more popular among expatriate, short business trip and travelers. Service apartment become one of their solutions. According to Alien section by Quality Houses Plc., the number of new available units increased 2,559 units from 27 services apartment projects in 2009 and 5 more projects are expected to launch with 329 units in 2010. On the other hand, number of foreigners who have work permit decrease to 58,058. Low demand but high supply will lead the competition among serviced apartment market is very intense. To survive and succeed in this market, the entrepreneur should know factors which affect rental rate and know how to set price. This rental model is a guideline to determine rental rate for new entrant, on the other hand, the current serviced apartment owners can understand their advantage and disadvantage point from the price model. The model also shows the value of leaded brands which assures that brand as intangible asset is value added to product. Moreover, researcher who is interested in pricing model can applied this model to other real estate.

1.5) Scope of the Study

In this research, all the data are serviced apartment in Bangkok area only. They were collected during March-June 2010. The rental rate is monthly rate which is more than THB 10,000. The selected samples are ready to be rented which means that there is no one is under construction. The researcher used secondary data which provide in internet website and telephone interviews.

1.6) Limitation of the Study

Researcher selected 4 branded serviced apartments (Fraser, Ascott, Centre Point, Oakwood) from 421 samples in Bangkok area only. This result may be not compared if research is done in the other countries such as America, Singapore. The selected samples are not taken into consideration the room's specific details such as the quality of furniture, the interior, furnishing and age of dwelling.

1.7) Definition of Terms

Serviced Apartment is a type of apartment where the room is furnished and designed to meet the tenant's basic needs. Serviced apartment has more service and facilities than regular apartments. Facilities and services may vary depending on types of residences such as laundry services, convenience stores, swimming pool and fitness center, baby sitting, maid service, etc. Rent is higher for a serviced apartment than a regular apartment due to a variety of extra services and facilities.

Room facilities are facilities that are equipped in the room such as an air-conditioner, a bathroom with bathtub, and furniture such as closet, bed, kitchen area, internet, Wi-Fi, etc.

Building Facilities are facilities which are provided outside room facilities such as Parking area, Security system / Keyed card, Swimming pool, fitness, etc.

Apartment Rental is an agreement between tenant and landlord. Apartment rental rate in this study is for one month.

Unit in this paper refers to a single dwelling in an apartment that may have a single room, bedroom, kitchen and/or living room etc.

MRT is Bangkok's subway metro system which is operated by Bangkok Metro Company Limited (BMCL). "MRT" is an abbreviation of "Mass Rapid Transit". Thai people know "MRT" widely as Rotfaifah mahanakhon.

BTS is the Bangkok Mass Transit System which is operated by Bangkok Mass Transit System Public Company Limited (BTSC). BTS is elevated electric train system. It is commonly known as BTS Skytrain or Rotfaifa BTS.

CHAPTER II

LITERATURE REVIEW

In order to study factors that determine serviced apartment rental fees in Bangkok Metropolis, this chapter will describe the relating theories, concepts and research that provides the basics for explaining brand concept and the hedonic pricing model, determining variables which affect the decision of renting serviced apartments and identifying implicit variables.

2.1 Brand

A brand is a sign or symbol to identify product or service and has a specific from the other products, service and competitors. Brand can be a trademark, logo, colors, renown and all elements that consumers associate with brand image (Tremblay, 2008). Brand has been created for centuries to differentiate one product from the others. The first sign of branding in Europe is that craftspeople stamped trademark on their products to guarantee quality. In the artwork, a brand was generated when artists signed on their works. Stephen King defined the difference between “brand” and “product” that a product is produced in a factory. It is easily copied but a brand is bought by a customer. A brand is unique. A product can be quickly out of date but a successful brand lasts forever. A brand is the most important asset for a lot of businesses. Brand assets can be trademark, or patent. Aaker (1991) conceptualized brand into four categories which were brand as product, brand as organization, brand as person and brand as symbol. There are three kinds of symbol which are visual imagery, metaphor and brand heritage.

Owing to high market competition and high technology of production, there are not much difference in appearance and function. Without brand, competition is based on only price. Marketers use brand to differentiate one product from the others and increase value in products and services. The benefits of firm that have a recognizable and successful brand are longevity and competitiveness. The firm with

successful brand can also increase line extension by using brand name to enter new product type. The firm can save advertisement cost and boost sale volumes because customers have awareness of original brand (Smith, 1991) such as Sony whose original product was television producer. At present, Sony has been also extended production line in radio, handy VDO camera, camera, computer, etc.

2.2 Brand Equity

Brand equity is the value added to products and services. It is reflected by customer's response and perspective to the brand (Kotler, 1996). Kotler's definition also corresponds with Farquhar (1989)'s. Farquhar defined brand equity as an intangible asset that increased product's value, chance of successful extension and blocked competitive new entry. He also classified brand equity into three perspectives

1) Financial: This involves with price premium. Price premium is the price which customers are willing to pay higher for branded product than unbranded.

2) Consumer based: It is customer's perception, attitude to a brand. Customer's attitude can be increased by powerful brand.

3) Brand extensions: A firm can use successful brand to extend production line or launce new product such as Siemens enter telecommunication business by using brand which is originally recognized as power electric provider.

The increasing of gap between book value and market value implies about increasing value of intangible asset but most of companies do not record intangible asset value in balance sheet. One of most valuable intangible asset is brand. For example, "Orange" brand was generated in 1994 by Hutchison Telecom's United Kingdom mobile phone network. The orange brand was purchased by France telecom in year 2000 with 31 billion pounds. Mannesmann paid almost 20 billion pounds for five years of mobile phone brand in year 1999 (Brand Finance PLC). Since December 1998, all companies in UK have recorded purchase goodwill and intangible asset in financial report under the Accounting Standard Board's new direction. From year 2005, all listed European companies have to input acquired intangible assets, such as copyrights, patents, brands, on their balance sheets by following New International Financial Reporting Standards (IFRS). Below is ranking of the best global brand value which is studied by Interbrand.

Table 2.1 Annual Ranking of the Best Global Brand 2009

Rank	Company	Brand Value (\$Millions)	Percent Change (last year)	Country
1	Coca-Cola	68,734	3%	US
2	IBM	60,211	2%	US
3	Microsoft	56,647	-4%	US
4	GE	47,777	-10%	US
5	Nokia	34,864	-3%	Finland
6	McDonald's	32,275	4%	US
7	Google	31,980	25%	US
8	Toyota	31,330	-8%	Japan
9	Intel	30,636	-2%	US
10	Disney	28,447	-3%	US

Source: Business Week, Interbrand's Annual Ranking of the Best Global Brand 2009

By ranking of Interbrand, Coca-Cola has been the most brand value since 2000. At the present, international firms such as LVMH, L'Oreal, Gucci, Prada and PRR have been recorded brand value in their balance sheet. Many researchers apply methods of valuing business to value intangible assets, including brand. Grover and Vriens (2006) have conceptualized three approaches to measure brand value as follows:

1) The cost approach is based on the required cost to recreate or replace brand which include research cost, development, advertisement, etc. However, it is hard to find the relationship between these cost and profit generating ability. If high advertisement investment does not help to generate profit or is not worth with profit, the result may be wrongly interpreted high value brand.

2) The market approach estimates value based on current market transaction. Price is determined by seller and buyer who are willing to do business. This method is used widely for estimating tangible assets such as stocks, residential properties because of large number of comparable price data. However, this method is not used widely for intangible asset because there are not many transactions related with intangible assets, especially brand. So it is hard to compare brand price by market approach.

3) The income approach is calculated from forecasting brand return and then discounted to net present value. Grove (2006) has classified three income

approaches which are 1) earning from brand name royalty 2) the earned premium profit by brand name 3) the actual profitability.

Brand valuation's method by Interbrand is based on the income approach. It uses five steps to value brand. Five steps are 1) market segmentation, 2) financial analysis, 3) demand analysis, 4) competitive benchmarking, 5) brand value calculation. Besides above three approaches, price premium approach is widely used to measure brand value. Price premium is additional money which customer is willing to pay for a branded product. Seutherman (2003) studied about purchasing decision between national and store brand at grocery store in America, showed that customers were willing to pay nearly 30% more for national brand. Price premium can be applied by customer research. By asking customer what they would pay for unbranded product. The same question was asked by including branded product. The increasing price from unbranded product is "price premium"(Aaker, 1991). Besides measuring price premium by customer research method, Kamakura & Russel (1989) used logit model to measure brand value of powder laundry detergent. Holbrook(1991) measured brand equity of electronic product by regression on quality ratings and brands. For this study, we will use the hedonic pricing model to measure brand value because the model focuses on product's characteristics than customer research. We can use publicized available secondary data. However, this model will not be suitable, if prices of being observed data (dependence variable) are not vary.

2.3 Hedonic Price Model

Hedonic Pricing Method (HPM) is used to estimate the implicit price of product. The basic concept of HPM is that price of one product will vary based on its own characteristic, quality, utility or service it provides. For example, 'C' apartment and 'B' apartment are exactly the same with the exception that 'C' apartment provides more room facilities than 'B' apartment which in turn makes 'C' apartment's rental higher. HPM is also used to estimate environmental quality, customer's satisfaction, and amenities to determine product's price. Basically, the market price is influenced by at least two factors. The first is supply and demand which determines the price. The second is the quality of the product. Frederick V. Waugh (1931) studied quality factors that affected the prices of vegetables. By using the linear multiple correlation

technique he found that the amount of green, size of stalk and uniformity of stalk in a bunch affected 57% of price. According to Rosen's (1974) model of product differentiation based on the hedonic hypothesis, products are valued by its own characteristics. Implicit prices such as rental price can be found by regressing product characteristics such as number of bedrooms, size of unit, surrounding environment, etc. HPM is also applied to estimate implicit price in many fields such as Travel Research, Real Estate, Agriculture Economics, Population and Environment etc.

Sirmans Macpherson & Zietz (2005) divided real estate characteristics into eight categories which are often used in real property HPM. These eight categories are structure feature (unit area, age, number of bathroom and bedroom), internal features (air conditioner, hardwood floors), external features (garage space, pool), natural environmental feature (lake view, ocean view), neighborhood and location, public services (marketing), occupancy and selling factors, and Financing issues. However, there are five categories which are widely used in studies and researches for real properties. They are 1) residence's characteristics 2) location 3) neighborhood 4) environment 5) other implicit variables

For residence's characteristics, variables include unit size, living area, number of rooms and age of dwelling are widely used to measure the implicit price of real property price such as house price, condominium price and rental price. Cheshire and Sheppard (1995) summarized that the size of the dwelling is a positive correlation with price because living area is related with the increase of dwelling's size thus, increasing property value. Benjamin, John, Guttery, Randall & Sirmans (2004) and Goodman (1997) used the number of rooms and bathroom as implicit variables to estimate price. They found that these variables have a significantly positive correlation with price. Some researches also use the number of stories in a house, town house, and commercial building instead of the size of the resident area. Santiya, Chucheep and Sitthinan (2005) concluded that the number of stories in a home has a positive correlation with the residence price. The total floor area increases as the number of stories increase. Manatthaworn (2003) studied how the number of stories in an apartment affects the rental price and summarized that the number of stories have a significant affect on rental fees. High story apartment buildings are equipped with more facilities and service equipment than low story apartment buildings. Follain and

Malpezzi (1981), Hardin and Cheng (2003) studied how the number of units in an apartment has a positive relation with rental. An apartment with a lot of units is equipped with more facilities and service. The owner of an apartment can prepare more facilities and services because cost per head is cheaper when the number of tenants increases.

The age of the property is a variable that affects price. A case study by Cheshire and Sheppard (2004) found that the age of a building has a negative correlation with price. Lee Chung and Kim (2005) summarized that the age of a building has a non-linear depreciation cost. For example, the initial price of a 27-year-old apartment decreased from 45 percent to 53 percent because of depreciation. But if the apartment is redeveloped, the rental price will increase from 28 to 32 percent of the present rent price. Security is also a variable affect to price. Tenants prefer to pay more for their safety. Residences with high security have higher rental fees. Benjamin, Sirman and Zietz's (1997) concluded that 24 hours security has significantly a positive correlation with price. Hardin and Cheng (2003) studied that gate access security by using key cards also have a significantly positive correlation with price. Garage unit is a necessary facility for premium residents because some tenants go to work by car. Tenants prefer to pay a higher rent to prevent burglary and automobile damages. Marks (1984), Hardin and Cheng (2003) found that the garage dummy variable is significantly positive to price.

A study by Sirman (1989), Goodman (1997), William G. (2003) noted that apartment facility variables such as service lift, swimming pool and fitness center have a significantly positive correlation with price. Wilson and Frew (2007) found that front service and internet access have a positive correlation with price. They use these facilities as a dummy variable. For room facility variables, Benjamin and Lusht (1993) found that a furnished room with furniture would have a higher rental fee than a room with no furniture. Goodman (1997) also noted that a room with a corridor has a positive relation with price.

Location is significantly affects real estate price. Price is high when location is good. A sociologist named Ernest W. Burgess (1925) proposed a concentric zone theory that divides a city into 5 zones.

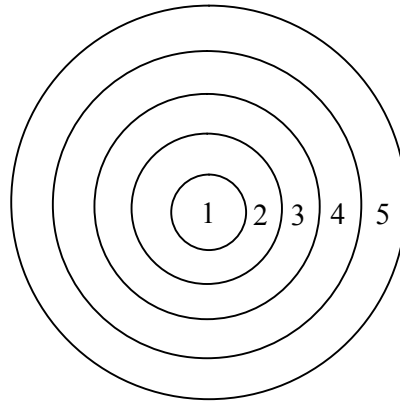


Figure 2.1 Five concentric zones

Zone 1: Central Business District

Zone 2: Transition Zone

Zone 3: Low Income Housing

Zone 4: High Income Housing

Zone 5: Commuter Zone

Each zone expands with city growth. In other words, the bigger the city is, the more the zone expands, the more land conversely correlates with distance from the center. This theory is widely used by real estate researchers to estimate how location affects price. Mills (1967), Muth (1969), Frew and Jud (2003) found that residences that are far from the central business district decrease in value more than residences near the center. Bung, Chung, Kim (2005) used distance from train stations to estimate property price. They found that distance is a negative correlation with price. Residences located near train stations will increase in value. Because of such factors, most of real estate researchers use the location variable as distant gradients and dummy.

Scenery, school, shopping department store are neighborhood factor which affect to price. Beautiful scenery increases the residence value. For example, a hotel or condominium is located on the coast has a room fee or price more expensive than a hotel located far from coast. For example, residential properties that have a scenic view of the Chaoparya river in Bangkok could be higher. This implies that a river view increases the property's value. Benson (1998) estimated the values of different types of views including coastal view, lake view, and mountainous view. He

found that each type of view increases the residence value at different rates. Likewise, Rinehart and Pompe (1999) studied how an ocean view, creek view and golf yard view affect the property value. They summarized that property value increases 147% for ocean view, 115% for a creek view and 39% for a golf yard view. Seiler and Bond (2001) studied the affect of Lake Erie view as a dummy variable. They found that a lake view increased home value by around 56%. Schools, Universities and shopping areas also affect residential price. Some landlords promote or advertise their apartments by using schools or universities located around their places. Manattavorn (2003) studied the factors that affect apartment rental. She found that having schools and shopping centers nearby have a positive correlation with price, which also corresponds to a study by Waddell, Berry and Hoch (1993).

Environment also affects the estimation of the residential property value. Based on the fundamental demand and supply concept, residents do not prefer to stay in a noisy area and because of such reasons, residences located near airports have a lower value. When demand decreases, price decreases. Nicosia (2003) studied whether airport noise impacted apartment rental rate. He found that airport noise has a significantly negative affect on rental rate. Pollution is another affect to residential price. Residences located near industrial areas decrease in value because of noise and air pollution. Ronald and John (1967) summarized that clean air has a positive influence on the value of residential property. To improve the prediction accuracy, some special variables are used in HPM. These variables are the type of project owner (public company, private company), house builders or real estate developers (brand). Eag-ark (2004) found that a developed housing project organized by a public company has a higher price than a project organized by a private company. The public company has a high and systematic management standard that affects the customer's positive attitude. Thus, the project owner significantly influences price. Leishman (2001) concluded that the branding of house builders significantly influences price.

From the above literature review, the varied prices of the same product type reflect its own characteristic and quality. To study the factors that determine a property's value (developed housing, condominium, apartment, etc.), the hedonic approach is widely used to regress price against the characteristics because properties have various physical characteristics (living area, unit size, number of bedrooms),

neighborhood factors (location, scenery, school, shopping arcade) and environment factors. For independent variables, each of the studies in the past may use the same or different variables depending on its specific purpose. For this study, brand is a special variable that is inputted in a model to prove whether brand is a significant variable of the model. Methodology will be explained in the next chapter.

CHAPTER III

METHODOLOGY

The data of serviced apartment prices and other information were collected in the Bangkok area only. The researcher also collected from online sources. These websites are apartment and serviced apartment information agencies and providers. They provide basic information such as location, facilities, rental rate, apartment's contact telephone number etc. Some of website lists are <http://www.bangkok-apartment.com>, <http://www.thai4rent.com>, <http://www.bangkok.com/hotels/serviced-apartments.htm>, http://www.thaiapartment.com/ServicedApartment/index_serviced.as <http://www.agoda.com/asia/thailand/bangkok>. To get more information, the researcher accessed directly to their own service apartment websites, which are provided in the above online sources. The collection period was during March to June 2010. In case that the online sources provide only daily or weekly rental rates, the researcher called directly to the apartment for a monthly rate. There were 421 collected samples to evaluate for the brand premiums. One hundred and thirty samples are from four branded serviced apartments.

By HPM, the relationship between the observed price (left-hand side) and the observed characteristics (right-hand side) are shown below.

$$P_i = f(x_{1i}, x_{2i}, x_{3i}, \dots, x_{3i}) \quad (1)$$

As the researcher set hypothesis that "brand" is one of the variables that effect rental rate so brand dummy variables ("b") are inputted in equation (1)

$$P_i = f(b_{1i}, b_{2i}, b_{3i}, \dots, b_{ni}, x_{1i}, x_{2i}, x_{3i}, \dots, x_{mi}) \quad (2)$$

P_i = Rental rate (dependent variable)

X_i = Independent variables((number of bedroom, size of unit, distant to MRT, etc)

b_i = Dummies of different brands

We can simplify

$$\text{Price} = \beta_0 + D_1B_1 + D_2B_2 + \dots D_mB_m + C_1X_1 + C_2X_2 + \dots C_nX_n + e$$

β_0 = intercept of model

C = Coefficient

D = Coefficient of brand

B = Brand dummy variable

e = error that deviates from the real data.

In this thematic paper, the researcher studies four branded serviced apartments by using branded dummy variables. If the observed data is not from one of the four branded apartment, the dummy variables are zero. The method is followed by a regression analysis of rental rates on attributes of serviced apartments. Table 3.1 shows the rental, brands, and the major attributes of serviced apartments with explanations.

Table 3.1 Variables of brands and features, explanations, and descriptive statistics of serviced apartment

Variable	Mean	Std Dev	Explanation
OAKWOOD	0.074	0.261	Oakwood Brand = 1, others = 0
FRASER	0.052	0.223	Fraser Brand = 1, others = 0
ASCOTT	0.069	0.254	Ascott Brand = 1, others = 0
CEN_POINT	0.114	0.318	Centre Point Brand = 1, others = 0
RENTAL	68,689.435	37,204.866	Monthly rental rate in THB
AREA	84.454	53.510	Unit area in square meters
BED_NO	1.283	0.980	Number of bedrooms
BATH_NO	1.489	0.722	Number of bathrooms
BTS	0.314	0.464	Distance to the nearest BTS station within 400 meters = 1, other = 0
MRT	0.169	0.375	Distance to the nearest MRT station within 900 meters = 1, other = 0
EXPWAY	0.627	0.484	Distance to the nearest express way within 2 KM. = 1, other = 0
REST_T	0.817	0.387	Restaurant in the building =1, none = 0
SPA_M	0.271	0.445	Spa in the building =1, none = 0
TERRACE	0.860	0.518	Number of terraces in a unit
SAUNA	0.715	0.452	Sauna in the building =1, none = 0
PLAY_G	0.772	0.420	Playground in the building =1, none = 0

From the secondary data of 4 branded serviced apartments, Centre Point has the most proportion samples which is 11.4% or 48 of 421 samples. Oakwood, Ascott and Fraser’s samples have proportions of 7.4% 6.9% and 5.2%. The average

rental rate is THB 68,689.435. The most expensive rental rate is THB 204,000 which was 160 square meters or THB 1,275 per square meter while the most expensive rental per square meter is THB 2357.14 by Bandara Suite Silom serviced apartment. It cost THB 66,000 for a studio of 28 square meters.

The average unit area is 84.454 square meters. The largest area is 301 square meters with 3 bedrooms and 3 toilets. Its rental is THB 158,000 near Sanam Poa BTS station while the smallest area is a 20 square meter studio type. From the collected data, the room types vary from a studio type to a 4 bedroom type. The average number of bedrooms is 1.283 rooms. It implied that one to two bedrooms are popular with tenants.

Accessibility is a primary requirement for tenants. From the above table, there are 31.4% serviced apartments which are located within 500 meters around the BTS and 16.9% of them are located within 900 meters around the MRT. There are 264 samples or 62.7% which are located within 2 kilometers of the express way. This result implies that most of serviced apartment locations are accessible to BTS (Bangkok Mass Transit System), MRT (Mass Rapid Transit) and the express way.

For the building facilities, 81.7% of sampled serviced apartments have their own restaurants to service tenants who have no time for cooking or for someone who does not want to go outside to buy food. This is also solution for expatriates who stay with a family. They can have dinner without going outside to a restaurant. As the data, 77.2 % of selected samples have a playground. It implies that there are number of foreign tenants or expatriate workers who take their family to stay together, during an expeditionary period so a playground is one of the facilities for children. Almost 100% of selected samples have a swimming pool and fitness room so both variables are not used in this hedonic pricing model. Sauna and spa massage service are sport and recreation facilities are applied in the model.

CHAPTER IV

RESULTS AND ANALYSIS

Table 4.1 shows the results from the Hedonic Models of serviced apartment in Bangkok area.

Table 4.1 Results from the Hedonic Models of serviced apartment

Variable	Rental	Log(Rental)
OAK	12,999.840 (4.349)**	0.289 (5.537)**
FRASER	45,233.450 (7.703)**	0.458 (7.773)**
ASCOTT	20,944.440 (6.073)**	0.272 (6.620)**
CEN_POINT	19,960.670 (6.645)**	0.261 (6.470)**
AREA	257.595 (4.663)**	0.004 (5.778)**
BED_NO	8,001.037 (3.304)**	0.197 (5.035)**
BATH_NO	5,330.327 (1.581)	-0.068 (-1.391)
BTS_500	14,503.630 (7.111)**	0.215 (6.679)**
MRT	5,108.820 (2.378)**	0.142 (4.313)**
EXPWAY	5,164.449 (2.458)**	0.152 (4.035)**
REST_T	14,470.820 (3.335)**	0.450 (6.254)**
SPA_M	2,572.874 (1.035)	0.038 (0.928)
BALCONY	2,501.027 (1.372)	0.061 (2.249)**
SAUNA	1,812.367 (0.774)	0.096 (0.030)**
PLAY_G	6,978.164 (1.817) *	0.004 (0.076)
N	421	421
Adjusted R ²	0.711	0.711
Durbin-Watson	0.705	0.504
F-Statistic	73.231	66.457

Note: Reference choice is unbranded serviced apartment. Numbers in parentheses are white heteroskedasticity-consistent t-statistics. ** P-value < 0.05 and * P-value < 0.10.

The result from the model shows that all selected brand dummies are positively significant so brand is a major factor in setting the rental rate. The constant value of a negative THB 8,307.693 refers to the serviced apartments which are not from the four branded apartments. As a result, the highest brand premium is Fraser,

while the lowest brand premium is Oakwood. The fundamental attributes, which are unit area, number of bedrooms and the accessibility to the transportation facilities (express way, BTS and MRT) are also positively significant. Unit area is valued at THB 257.595 per square meter while one bedroom is worth THB 8,001.037. One bedroom premium is worth more than one square meter area because of a room's facility value. The room facilities are being equipped in with an air-conditioner, bed, television, stereo system, DVD furniture and etc.

Serviced apartments near a BTS, MRT or express way, also offer a premium of THB 14,503.630, 5,108.820, 5,164.449, respectively of value added. The distance is measured by following the road route not point to point by using a Google map tool. The researcher determines the distance of 400 meters from BTS station to a serviced apartment as "near" while a distance within 900 meters from an MRT subway is determined as "near". The researcher can not use the same 400 meters distance as for the BTS because of limitation of serviced apartment samples around the MRT. Most serviced apartments are located around Sathorn, Silom and Sukhumwit area where the BTS passes through while only Silom and Asoke station on the MRT route are connected with BTS. The main route of the MRT passes through Ratchadapisek road where many condominiums and apartments are located. If a 400 meter distance from a MRT station is used, then MRT accessibility will not be significant. So 900 meters distance is applied in this model. The distance within 2 kilometers from an express way is defined as "near" in this paper. The researcher determines that if a tenant can arrive at the express way within 3 minutes by driving a car, this distance will be determined as "near". The researcher calculated the driving time to an express way by assuming a car speed of 40 K.M. per hour. It takes 3 minutes to the express way, based on no traffic jams condition.

A restaurant is worth THB 14,470.820. Having a restaurant in building, tenants can save traveling time by not going outside for meal. It is also convenient for a tenant who does not like cooking or has limited time. A restaurant is one solution for an expat family who want a change of atmosphere to have a meal in a room. A playground is worth THB 6,978.164. This implies that there are quite number of expat families in Bangkok. A playground is also value added for expatriate workers who stay with children. Spa, balcony and sauna are not significant although their constant

values are positive. Balcony and sauna seem to be a basic characteristic and facility of serviced apartments. 86% of samples have a balcony in each unit while 75% of samples have a sauna as sports and creational facility.

Table 4.2 Brand valuation on price premiums of serviced apartment

<i>Brand</i>	<i>Brand Value in THB million (Absolute)</i>	<i>Brand Value in THB million (Relative)</i>
OAK	4,692.147	12,999.840
CEN_POINT	11,652.977	19,960.670
ASCOTT	12,636.747	20,944.440
FRASER	36,925.757	45,233.450

Table 4.2 shows the value of each brand by running a regression from the hedonic pricing model. The brand values are listed in order from the lowest to the highest. All brand dummies are positively significant which assure that brand is one of the significant factors that affect to rental rates. As a result, The Fraser brand is ranked as the highest followed by Ascott, Centre Point and Oakwood, respectively. The Fraser brand value is THB 36,925.757 which assures a strong brand equity. Ascott brand is the second highest which is worth THB 12,636.747, followed by Centre Point and Oakwood brand at THB 11,652.977, THB 4,692.147, respectively.

CHAPTER V

CONCLUSION

The results of fundamental attribute's premiums from the hedonic price model are reasonable to the rental rate. The unit space, number of bedrooms, accessibility to the transportation facilities are positively correlative with rental rates. This research also measure brand premium by using hedonic method. Brand premium is additional money a customer who is willing to pay for a branded product. The hedonic price model is an effective tool to appraise brand premium. As a result, all selected brand are positively significant. The Fraser brand premium is ranked as the highest premium brand, followed by Ascott, Centre Point and Oakwood, respectively. This assures that brand as an implicit variable is one of the most significant factors to rental rates. Fraser, Ascott and Oakwood have set their brand positions as international brands. Their serviced apartments are settled in Asia, America and Europe while Centre Point is a local brand which operates 8 serviced apartments in Bangkok. One reason why The Fraser brand is the highest premium is its very strong brand equity.

Fraser has received awards for best brand serviced apartments which were hold by famous travel magazines, Hotel Motel & Accommodation Association, guide magazines ,etc. since 2005 to the present. Fraser has set targets to be global leader in the service residence business. Fraser sets its brand concept differently in each serviced apartment type. With "Fraser suite" brand, Fraser uses "Sophisticated and timeless" concept which reflects luxurious life style and distinctive decor reflecting the essence of city host while " Fraser Place" presents the essence of cosmopolitan living with energy in a prime location area. Ascott brand is the second highest rank which is worth THB 12,636.747. Ascott has also received brand awards at international level. Ascott's divided into 3 sub-brands (Ascott, Somerset and Citadines) and sets brand concepts individually. Ascott the residence brand represents

exclusive living, Somerset Serviced Residence brand represents balanced living and Citadines brand represent vibrant living.

Centre Point brand is operated by Quality Houses Public Company Limited, which is the leader in Thailand's real estate business. The company started the serviced apartment business and office building for rent in 1990. At present, the company also sells land and houses and residential condominiums. The company uses several sales channels and a good customer relationship to compete in the market. With long experience and brand name in Thailand, The Centre Point brand is the third rank with a value of THB 11,652.977. Oakwood divides brands into three sub-brands which are Oakwood Premier, Oakwood Residence and Oakwood Apartment. The premier brand is the highest rank, followed by Residence and Apartment brand. The Oakwood brand premium is the fourth rank with a value THB 4,692.147 because the average rental rate is the lowest. Although the rental rate per square meter of Oakwood serviced apartments in Sukhumvit soi 18 and 24 are THB 1,468.146 and THB 1,164.222, respectively, rental rate in Bangna and Thonglor are low at THB 716.769 and THB 886.828 per square meter, respectively. Bangna's rate is low because it is not located in central business area while in Thonglor, a square meter rental for a 46 square meter unit costs THB 1,171.739 but a 139 square meters unit costs THB 759.563 so the rental average of unit at the Thonglor branch is THB 886.828. Owing to low rental rate of both branches, the total average of Oakwood rental is THB 1,054.977. However it does not mean that the Oakwood brand premium is always lower than the other 3 brands. As the researcher used samples in the Bangkok area only, the result can not be represented in a different country. The Oakwood brand equity is very strong because of its 50 years' experience and worldwide awards.

At present, not only the increasing competition among serviced apartments, but the competition has also expanded directly to hotels to the short term stay market. Brand is one of the most effective tools to block competitive new entries and increase the chances of success in business. In another way, branded serviced apartments also have a great potential to enter the market. At least, this research encourages business owners to recognize brand value and assure that brand affects

directly rental rates. However, this model will not be effective if the rental rates are not different.

REFERENCES

- Aaker, D.A. (1991). *Managing Brand Equity: Capitalizing on the value of a brand name*. *The Free Press New York*.
- Benjamin, J.D., Sirmans, G.S. & Zietz, E.N. (1997). Security Measures and The Apartment Market. *The Journal of Real Estate Research Volume 14(3)*, 347-358.
- Benjamin, J.D. & Lusht, K.M. (1993). Search Cost and Apartment Rents. *The Journal of Real Estate Finance and Economics*, 6, 189-197.
- Benjamin, J.D., Guttery, R.S. & Sirmans, C.F. (2004). Mass Appraisal: An Introduction to Multiple Regression Analysis for Real Estate Valuation. *The Journal of Real Estate Practice and Education*, 7, 65-77.
- Benson, E.D., Hansen, J.L., Schwartz Jr. A.L., Smersh and Greg T. (1998). Pricing Residential Amenities: The Value of View. *The Journal of Real Estate Finance and Economics*, 16(1).
- Brand Finance plc. (2000). *Current Practice in Brand Valuation*. Retrieved on May 12, 2010 from http://www.brandfinance.com/Uploads/pdfs/CurrentPracticein_Brand_Valuation.pdf
- Bun, L., Chung, C., & Kim, Y. (2005). Dwelling Age, Redevelopment, and House Prices: The Case of Apartment Complexes in Seoul. *The Journal of Real Estate Finance and Economics*, 30(1).
- Centre Point Hospitality (2010). Retrieved April 7, 2010, from <http://www.centrepointhospitality.com/bangkok-apartments/hotel-apartment.aspx>
- Chongyosying, C. (2005). *Application of Hedonic Pricing Model For Real Estate Valuation In Bangkok Metropolis*. (Doctoral, Ramkhamhaeng University, 2005). Retrieved May 1, 2010, from <http://tdc.thailis.or.th/tdc/RUJ-093-SEP-2006-476.pdf>
- Eag-ark, S., Piputsitee, C. & Wiwatthanapornchai, S., (2004). *An Economic Analysis of The Single House Subdivision Market: A Case Study of Prathumthani Province*, (Kasetsart University, 2004). Retrieved from

<http://www.lib.ku.ac.th/KUCONF/KC4207004.pdf>

- Farquhar P.H. (1989). Managing Brand Equity. *Marketing Research*, 1(3), 24-33.
- Follain, J.R. & Malpezzi, S. (1981). Another Look at Racial Differences in Housing Prices. *Urban Studies*, 18(2), 195-203
- Frasers Hospitality PTE, Ltd. (2010). Retrieved April 7, 2010, from http://www.frasershospitality.com/aboutus_heritage.php
- Frederick V.W. (1931). *Quality as a Determinant of Vegetable Prices*. The Journal of Political Economy, 39(2), 277-278.
- Frew, J & Jud, G.D. (2003). Estimate The Value of Apartment Building. *The Journal of Real Estate Research*, 25, 77-86.
- Goodman, A.C. & Goodman, Jr. (1997). The Co-op Discount. *The Journal of Real Estate Finance and Economics*, 14, 223-233.
- Grover, R & Vriens, M (2006). *The Handbook of Marketing Research: Use, Misuses, and Future Advances*. SAGE Publications, Inc.
- Interbrand and BusinessWeek, *Best global brands 2009*. Retrieved on May 12, 2010 from <http://www.interbrand.com>
- Rinehart, R.J. & Pompe, J.P. (1999). Estimating The Effect of A View on Undeveloped Property Value. *The appraisal Journal*, January
- Keller, K.L. & Kotler, P. (2006). *Marketing Management (12th ed.)*, Pearson Edition International.
- Leishman, C. (2001). Housing Building and Product Differentiation: *A Hedonic Approach*. *Journal of Housing and the Built Environment*, 16(2), 131-152.
- Manatthaworn, P., Niphanpaisarn, S., & Linmachawadee, V. (2003). *The Factors Affecting Apartment Rental in Downtown Area by Hedonic Pricing Model* (Thammasart University, 2003) Retrieved from <http://library.tu.ac.th/acc/mre/mre1.html>
- Marks, D. (1984). The Effect of Rent Control on The Price of Rental Housing: An Hedonic Approach. *Land Economics*, 60, 81-94
- Market View Bangkok Overview Fourth Quarter*. (2009). Retrieved May 12, 2010, from <http://www.cbre.co.th>
- Market View Bangkok Residential Leasing Fourth Quarter*. (2009). Retrieved May 12, 2010, from <http://www.cbre.co.th>

- Nicosia, D. (2002). *Airport Noise and Apartment Rental Rate*. (Geography, Southwest Texas State University, 2002). Retrieved from <http://www.ucgis.org/summer03/studentpapers/davidnicosia.pdf>
- Oakwood (2010) Retrieved April 7, 2010, from <https://www.oakwood.com/cms/about-oakwood-1.html>
- Ronald, G.R., & John, A.H. (1967). The Determinants of Residential Property Values With Special Reference to Air Pollution. *The Review of Economics and Statistics*, 246 – 257.
- Rosen, S. (1974). Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition. *The Journal of Political Economy* 82, 34-55
- Seiler, L. V., Seiler, J. M. & Bond, T. M. (2001). The Impact of World Class Great Lakes Water Views on Residential Property Values. *The appraisal Journal*, July 1.
- Sirmans, G. S., Macpherson, D. A. and Zietz, E. N. (2005). The Composition of Hedonic Pricing Models. *Journal of Real Estate Literature*, 13(1), p. 3-43.
- Smith, D.C. (1991), An Examination of Product and Market Characteristics that Affect the Financial Outcomes of Brand Extension. *Report No. 91-103, Marketing Science Institute, Cambridge, MA*.
- Supranee T. (2008). The Study of Factors Determining Apartment Rental Price By Hedonic Pricing Method: A Case Study of Rangsit Campus, (Department of Economic, Thammasart, 2008). Retrieved from <http://dcms.thailis.or.th>
- The Ascott limited (2010). Retrieved April 7, 2010, from <http://www.theascottlimited.com/aboutus/corporateprofile.html>
- Tremblay, C. (2008). A How-To Guide to Assessing Brand Value, Retrieved May 1, 2010, from http://www.brandchannel.com/brand_speak.asp?bs_id=193
- Waddell, P., Berry, B.J.L & Hoch, I. (1993). Residential Property Values in A Multimodal Urban Area: New Evidence on The Implicit Price of Location. *The Journal of Real Estate finance and Economics* 7, 117-141.
- William G. Hardin III & Ping C. (2003). Apartment Security: A Note on Gate Access and Rental Rates. *Journal of Real Estate Research* 25, 145-158
- Wilson, B & Frew, J. (2007). Apartment Rents and Locations in Portland, Oregon:1992-2000. *The Journal of Real Estate Research*, 29,2

BIOGRAPHY

NAME	Pakpoom Vipassapan
DATE OF BIRTH	3 August 1979
PLACE OF BIRTH	Bangkok, Thailand
INSTITUTIONS ATTENDED	King Mongkut's University of Technology Ladkrabang, 1997-2000 Bachelor of Electrical Engineering
POSITION&OFFICE	3195/17-29 Rama IV Road, Klongton, Klong Toey District, Bangkok 10110, Thailand Position: Volumetric Accounting Analyst Tel. 662-262-4576 E-mail: th-paa@exxonmobil.com
HOME ADDRESS	90/62 Soi Pavana , Latphrao Road, Chatuchak District, Bangkok 10900, Thailand Tel. 668-5677-4554