EFFICIENCY AND EFFECTIVENESS OF HOTELS IN KUALA LUMPUR AND FACTORS AFFECTING THEIR PERFORMANCE

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By

ELHAM RAHMATI

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfillment of Requirements for the Degree of Doctor of Philosophy

January 2015

DEDICATION

To My Parents
For Their Endless Love and Support All Through My Life

To My Sisters
For Their Great Support and Encouragement

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy

EFFICIENCY AND EFFECTIVENESS OF HOTELS IN KUALA LUMPUR AND FACTORS AFFECTING THEIR PERFORMANCE

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January 2015

Chair: Professor Zulkornain Yusop, PhD

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The hotel industry in Malaysia receives about 31 percent of tourists' travel expenditures. This industry highly contributes to the revenue of the tourism industry as the second largest foreign exchange earner in Malaysia. However, it has been performing inefficiently due to under capacity utilization during the last few years. This under capacity utilization of the hotels as well as the low level of Malaysian room rates compared to the room rates in the Asia Pacific region, affect the performance of the hotels adversely. Therefore, the hoteliers should promote efficiency to remain competitive in the market.

Due to the perishable nature of the hotel services, all what is produced may not be sold in practice. It means production and consumption of the hotel services cannot be assumed to be the same. Hence, to consider the not-utilized portion of production in the performance analysis, a joint measurement of service production efficiency and service consumption effectiveness should be applied to fully capture the overall performance. Accordingly, this study employs a two-stage DEA model to identify the main sources of inefficiency of the hotels in Kuala Lumpur from 2004 to 2010.

Based on the results, none of the hotels of interest operates at the maximum productivity level; therefore, the inefficiency of the hotels is due to either technical problems or operational scale problems or both. The findings show that the dominant source of inefficiency in three- to five-star hotels in Kuala Lumpur stems from technical problems in the sales process. That is to say, the hotels; particularly those of higher star-ranking have more managerial problems in transforming the service capacity into the revenue.

The inefficiency of the hotels is further intensified by outweighing the loss of the competition over the agglomeration benefits in the hotel clusters in Kuala Lumpur. However, operating in smaller size in terms of room supply, operating as a chain hotel, being quoted on the stock market, and having foreign shares in the hotel capital improve the efficiency of the hotels.

Moreover, based on the marketing performance analysis, the hotels especially the higher star-ranking ones tend to have more technical problems in transforming the

marketing inputs into the occupied rooms. The hotels particularly the lower star-ranking ones have more managerial problems in transforming the occupied rooms into the profit. According to the results, on average, the marketing effectiveness of the hotels during the period under study is 29 percent. It implies that the maximum profit made using the capacity of the hotels is about 29 percent of the maximum profit that could be made using the same service capacity and marketing technology on the overall frontier. There is also a highly positive correlation between marketing efficiency and marketing effectiveness. That is, improving marketing efficiency would lead to higher profitability level.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
Sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

KECEKAPAN DAN KEBERKESANAN HOTEL DI KUALA LUMPUR DAN FAKTOR YANG MEMPENGARUHI PRESTASINYA

Oleh

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Industri hotel di Malaysia menerima 31 peratus daripada perbelanjaan perjalanan pelancong. Industri ini sangat menyumbang kepada hasil industri pelancongan sebagai sumber pertukaran asing kedua terbesar di Malaysia. Walau bagaimanapun, ia telah dilaksanakan dengan tidak cekap kerana penggunaan di bawah kapasiti dalam tempoh beberapa tahun yang lalu. Penggunaan kapasiti yang rendah di bawah satu hotel dan juga tahap kadar harga bilik di Malaysia yang rendah berbanding dengan kadar harga bilik di rantau Asia Pasifik memberi kesan yang negatif kepada prestasi hotel. Oleh itu, pengusaha hotel harus menggalakkan kecekapan untuk kekal berdaya saing dalam pasaran.

Oleh kerana sifat keluputan perkhidmatan hotel, semua yang dihasilkan tidak boleh dijual dalam amalan sebenar. Ini bermakna pengeluaran dan penggunaan perkhidmatan hotel ini tidak boleh dianggap sama. Oleh itu, untuk mempertimbangkan bahagian yang tidak digunakan bagi pengeluaran dalam analisis prestasi, pengukuran bersama kecekapan perkhidmatan pengeluaran dan keberkesanan penggunaan perkhidmatan harus diterapkan sepenuhnya bagi melihat prestasi keseluruhan. Sehubungan dengan itu, kajian ini menggunakan model DEA dua-peringkat untuk mengenalpasti punca-punca utama ketidakcekapan dalam hotel di Kuala Lumpur dari tahun 2004 hingga 2010.

Berdasarkan hasil kajian, tiada hotel yang dikaji beroperasi pada tahap produktiviti yang maksimum; oleh itu, ketidakcekapan hotel adalah disebabkan oleh masalah teknikal atau masalah operasi skala atau kedua-duanya. Dapatan kajian menunjukkan bahawa punca dominan ketidakcekapan dalam tiga ke lima-bintang Hotel di Kuala Lumpur berpunca daripada masalah teknikal dalam proses jualan. Terutamanya hotel yang mempunyai kedudukan bintang yang lebih tinggi mempunyai masalah dalam pengurusan dari segi transformasi kapasiti perkhidmatan menjadi hasil.
Ketidakcekapan hotel tersebut telah dibebani lagi dengan kerugian persaingan yang mengatasi keuntungan melalui hotel-hotel di Kuala lumpur. Walau bagaimanapun, operasi dalam saiz yang lebih kecil dari segi bekalan bilik, beroperasi sebagai hotel rantai, disenaraikan di pasaran saham dan mempunyai saham asing di hotel meningkatkan kecekapan hotel.

Selain itu, berdasarkan analisis prestasi pemasaran, hotel yang terutamanya mempunyai bintang berpangkat lebih tinggi cenderung mempunyai masalah yang lebih teknikal dalam mengubah input pemasaran ke dalam bilik yang diduduki. Hotel-hotel khususnya bintang berpangkat rendah mempunyai masalah lebih kepada pengurusan dalam mengubah bilik-bilik yang dihuni menjadi keuntungan. Menurut hasil kajian secara purata, keberkesanan pemasaran hotel sepanjang tempoh kajian adalah 29 peratus. Ini memberi implakasi bahawa keuntungan maksimum yang dibuat menggunakan kapasiti hotel adalah kira-kira 29 peratus daripada keuntungan maksimum yang boleh dibuat menggunakan kapasiti perkhidmatan yang sama dan pemasaran teknologi on the overall fontier. Terdapat juga korelasi positif yang sangat tinggi antara kecekapan dan keberkesanan pemasaran. Oleh itu, meningkatkan kecekapan pemasaran akan membawa kepada tahap keuntungan yang lebih tinggi.

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I certify that a Thesis Examination Committee has met on 16 January 2015 to conduct the final examination of Elham Rahmati on her thesis entitled "**Efficiency and Effectiveness of Hotels in Kuala Lumpur and Factors Affecting Their Performance**" with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U. (A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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LIST OF ABBREVIATIONS

AE	Allocative Efficiency
AOR	Average Occupancy Rate
ADR	Average Daily Rate
BCC	Banker, Charnes and Cooper
BLUE	Best Linear Unbiased Estimator
CCR	Charnes, Cooper and Rhodes
CPI	Consumer Price Index
CRS	Constant Returns to Scale
DRS	Decreasing Return to Scale
DEA	Data Envelopment Analysis
DMU	Decision Making Unit
EE	Economic Efficiency
FE	Fixed Effect
IDEA	Integrated Data Envelopment Analysis
IMP3	Malaysian Third Industrial Master Plan
IRS	Increasing Return to Scale
LM test	Lagrange Multiplier test
LP	Linear Programming
LSDV	Least Square Dummy Variable
NDEA	Network Data Envelopment Analysis
OLS	Ordinary Least Squares
PTE	Pure Technical Efficiency
RE	Random Effect
RevPAR	Revenue Per Available Room
RTS	Return to Scale
SARS	Severe Acute Respiratory Syndrome
SBM	Slack-Based Measure
SCEV	Service Consumption Effectiveness
SCP	Structure- Conduct- Performance
SE	Scale Efficiency
SFA	Stochastic Frontier Analysis
SPE	Service Production Efficiency
TE	Technical Efficiency
TOPS	Technically Optimal Productive Scale
U.S.A	United States America
UNWTO	United Nations World Tourism Organization
USD	United States Dollar
VRS	Variable Returns to Scale

CHAPTER ONE

INTRODUCTION

A Firm's performance is defined as the degree of a firm's success to achieve management objectives (Devine, Lee, Jones, & Tyson, 1985). Technical efficiency as a performance measure represents the ability of management to minimize input usage under a given level of output or to maximize output level using a given combination of inputs. Any resources utilized in excess of the optimal quantity are represented as a deviation from efficiency. The additional cost and the shortcomings of revenue due to inefficiencies will be reflected in the firm's profit. Operating at an efficient level, minimizing input excesses and output shortages, most likely leads to a higher profitability level and consequently survival. Therefore, efficiency, as a key determinant of competitiveness, is a crucial performance measure for analyzing the performance of firms operating in competitive markets (Barros, 2005).

The hotel industry is an extremely competitive industry with numerous market players providing highly differentiated services. More frequent presence of international tourists and international hotel companies in the market as a result of globalization of the industry, has heightened the competition in recent years (Go, Pine, & Hanlon, 1995; Theobald, 1994). Therefore, a hotel must remain competitive to survive in such a market. The hotel industry in Malaysia, specifically the segment of the three- to five-star hotels in Kuala Lumpur, is also not immune from the effects of growing competition, both locally and globally. Therefore, its survival and growth is highly dependent on its efficiency and optimized performance.

Due to the perishable nature of hotel services, they cannot be stockpiled until consumed. Hence, despite storable products, production and consumption of them cannot be assumed to be the same. Technical efficiency which indicates how well production is transformed from inputs cannot represent the relative performance of a hotel in its entirety. Therefore, to have a comprehensive evaluation of the sources of inefficiency of the hotels in Kuala Lumpur, efficiency of the production process (hereafter service production efficiency) and efficiency of the consumption/sales process (hereafter service consumption effectiveness) which shows how well consumption/sales is transformed from production, should be measured simultaneously. According to the structure-conduct-performance (SCP) model (Mason, 1939; Bain, 1956), inefficiency can also be caused by environmental factors such as government policy, location characteristics, and operating form. Environmental factors of inefficiency are associated with the environment in which hotels compete. In general, hoteliers have little or no control over this environment (at least in the short term). However, environmental factors affect the management's ability to transform inputs into outputs and subsequently lead to different efficiency levels across hotels.

Occupancy rate shows the ability of hotel management to attract guests. It has been used as one of the traditional and standard measures to evaluate hotel performance. Due to substantial fixed costs of hotel operation and perishability of hotel services, profit level of a hotel is greatly tied to its occupancy rate (Allen, 1988), which is highly influenced by marketing activities.

1.1 Background

The Malaysian tourism industry has experienced a rapid growth in terms of the number of tourist arrivals and tourist receipts (Tourism-Malaysia-data, 2008) since the formation of the Ministry of Tourism and Culture in 1987. Malaysia has been recorded as the tenth tourist destination in the world in terms of international tourist arrivals in 2012 (UNWTO-data, 2010). Accommodation is the most important need of any tourist. In response to this growing need, many accommodation establishments have been built in order to provide tourists with accommodation services. Hence, the hotel industry in Malaysia has been receiving, on average, 31 percent of tourists' travel expenditures and is considered as one of the most important subsectors of the tourism industry (Tourism-Malaysia-data, 2008).

The Malaysian hotel industry is a competitive industry with many hotel companies providing highly differentiated services. According to the statistics, in 2010 there were 3,129 accommodation establishments[1] which supplied 182,781 rooms in Malaysia (Statistics-data, 2010). These accommodation properties are different in terms of services provided, quality level, room rates, operating form (i.e., chain-operated and independent-operated), foreign or local ownership, and geographical location. These differentiations could cause efficiency differences across hotels.

Until 2010, there were only 20 hotels out of 515 hotels in Malaysia with 50 percent or more of their capital belonging to foreigners (Statistics-data, 2010). In 2009 the Malaysian government liberalized 27 service subsectors, including tourism services to attract more foreign investments and to bring in more experts as well as technical knowledge in order to strengthen the competitiveness of the industry. According to this policy, the government allows 100-percent foreign-equity ownership of four- and five-star hotels (Prime-Ministry-Office, 2009). Therefore, it is expected that more international hotels will enter the market. These hotels are usually able to lower costs of operations and operate more efficiently than other hotels.

The location where hotels operate is an extremely important factor that influences their performance. Some of the tourist destinations in Malaysia such as Langkawi and Kota Kinabalu have the key competitive advantage over others to attract tourists.

1. According to the rating system applied by the Ministry of Tourism of Malaysia, accommodation properties operating in Malaysia's hotel industry are divided into four types: 1) hotels including resorts and service apartments rated from three to five stars; 2) budget hotels; 3) chalets; and 4) rest houses/guest houses/hostels/bed and breakfast.

Subsequently, more investors tend to establish hotels in such locations to satisfy the high demand for hotel services. However, such growing number of accommodation establishments and room supply in specific locations heightens the competition among these hotels. Figure 1.1 shows the distribution of accommodation establishments, room supply, number of hotel guests, and revenue in Kuala Lumpur and the top four tourist destinations in Malaysia between the years 2005 and 2010. Based on this information, Kuala Lumpur is the major contributor to the average number of hotel guests (26 percent), room supply (19 percent), and revenue from the Malaysian hotel industry which is about 30 percent.

Location is an inseparable part of the services provided by service companies such as hotels, and the selection of hotel location by travelers depends on their objective for traveling (Canina, Enz, & Harrison, 2005). For example, being located in the city and offering accommodation services to travelers who are intending to stay in a metropolitan area is a part of the services provided by city hotels. Therefore, it is not surprising that Kuala Lumpur, as a capital city and business hub with popular shopping destinations and tourist attractions was reported as the sixth most-visited city in the world in 2011, having had 9.2 million international tourist arrivals (UNWTO-data, 2010) resulting in a high contribution of Kuala Lumpur hotels to the total revenue of the hotel industry.

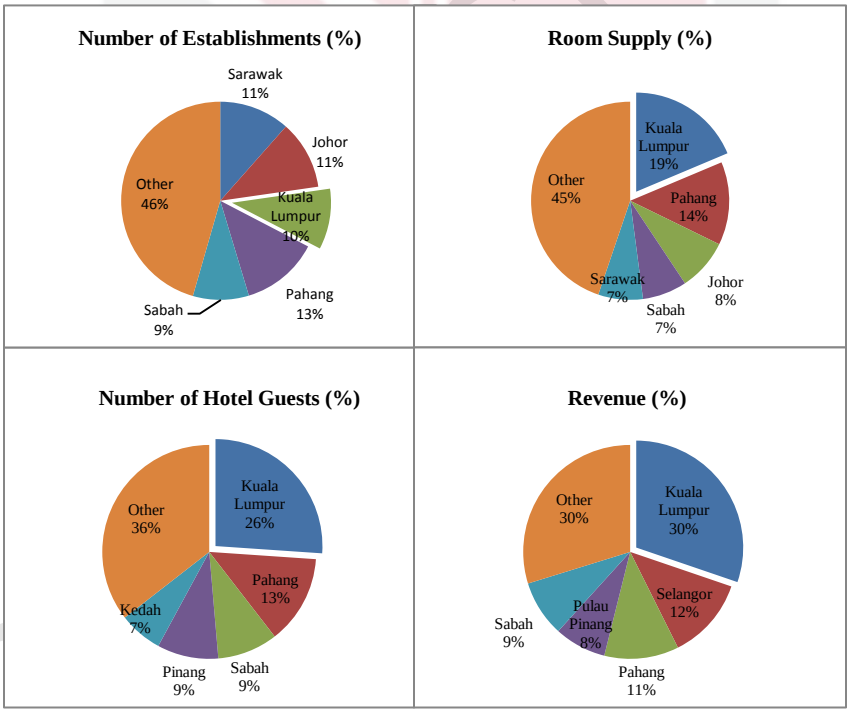

Figure 2-1. Average Distributions of Accommodation Establishments, Room Supply, Hotel Guests, and Revenue during 2005-2010 by Top Five Locations

Based on the information in Table 1.1, the majority of the high-star-rating hotels are concentrated in Kuala Lumpur. Three- to five-star hotels and hotel apartments in Kuala Lumpur supply 26 and 29 percent of the total supply of rooms and apartment units, respectively. These hotels normally supply more rooms, more services, and offer high quality accommodations and consequently room rates compared to other accommodation establishments. They also supply additional facilities such as banquet and conference halls. Therefore, it is not surprising if three- to five-star hotels are an extremely significant contributor to the hotel industry revenue. On average, 89 percent of the total revenue of the hotel industry is generated by three- to five-star hotels (including resorts and hotel apartments), although they make up 16.5 percent of the total number of accommodations in the country (Statistics data, 2010).

Table 2-1. The Number of Three- to Five-star Hotels and Hotel Apartments in Kuala Lumpur in 2010

	Total		5 star		4 star		3 star		3 to 5 star	
	Hotel	Room	Hotel	Room	Hotel	Room	Hotel	Room	Hotel Apartment	Unit
Kuala Lumpur	62	23331	23	10957	17	7092	22	5282	18	2620
Malaysia	361	90929	88	32327	100	27162	173	31440	81	8956

(Source: Valuation and property services department, Property stock reports, 2010)

Normally, the hotel industry is characterized by local competition. Hotels only compete with those that are located in the same geographical area (Baum & Mezias, 1992). Therefore, Kuala Lumpur, as the highest contributor to the total room supply and hotel guests, is faced with a higher level of competition in comparison with other popular tourist destinations in Malaysia such as Pinang, Kota Kinabalu, Langkawi, Kuching, and Johor Bahru.

Having a competitive advantage is not limited to different destinations in the country. It can also be observed in different locations in a city. For example, the Golden Triangle is a large area in Kuala Lumpur, which is a commercial center, as well as a shopping and entertainment hub of the city that includes the Petronas Twin Towers and a distinctive nightlife. This area is considered as the key position in the Malaysian tourism industry, since it has a geographical concentration of interconnected tourism businesses such as hotels, restaurants, shopping centers, and tour-guide agencies. In this area, a large number of hotels, comprising local and foreign brands, with different sizes and star ratings are located close to one another. Therefore, according to the agglomeration theory, hotels agglomerated in a certain location benefit from demand-based advantages of agglomeration (Marshall, 1920). To be more specific, agglomeration of hotels in a convenient location such as the Golden Triangle in Kuala Lumpur, enables consumers to personally observe the differentiated services provided by different hotels. Thus the likelihood of frequent visitations and subsequent purchases of hotel services will increase in this area. Moreover, the existence of valuable infrastructures such as transportation, restaurants, and shopping centers further

increases the demand for hotel services in such an area. Due to the perishability of hotel services, offering these kinds of services in such a convenient location helps hoteliers stay closer to consumers and manage the demand more effectively. On the other hand, in such areas, hotels compete against each other more strongly due to physical proximity (Tsang & Yip, 2009).

Two other factors that affect performance of hotels are the levels of demand and supply. In recent years, the government's tax incentives and liberalization policies have increased domestic and foreign investments in hotel properties in Malaysia. In 2011, Malaysia and Kuala Lumpur experienced a large growth in hotel room supply, 14.7 percent and 28 percent, respectively (Tourism-Malaysia-data, 2008). According to CBRE (2012) the existing supply of four- and five-star hotels in Kuala Lumpur will likely increase by 14.6% by the end of 2014. All above mentioned statistics and plans have been the cause of recent economic concerns over potential oversupply in Kuala Lumpur (CBRE, 2012). Despite the increase in supply of hotel rooms in Malaysia during the past few years, the demand for hotel rooms has been influenced by the increasing levels of uncertainties in the hotel business environment. Due to globalization of the hotel industry, performance of this industry has been affected not only by the economy of this country itself, but also by the economies of other individual countries (Wang, 2009; Wang & Wang, 2009). Since hotels are mostly used for leisure time, their services are considered as luxury goods. Under uncertain economic conditions, people tend to travel less and hence, demand for hotel services will decrease. This may lead to the decline of hotel guests and oversupply of hotel rooms for a while. For instance, since more than 57 percent of tourist arrivals and 59 percent of tourism receipts come from Singaporean tourists (Tourism-Malaysia data, 2008), if Singapore faces an economic crisis, the demand of hotel rooms and subsequent foreign exchange earnings in Malaysia would be reduced.

The interaction of demand and supply of hotel rooms can be shown by the occupancy rate of hotels. The average occupancy rate (AOR) of hotels in Malaysia and Kuala Lumpur has been 62 percent and 65 percent respectively, during 2003–2012. It shows a rather large idle capacity compared with some other countries in the region such as Singapore (82 percent) and Hong Kong (78 percent) (Tourism-Malaysia data, 2008; CBRE, 2012). That is, on average, about 38 percent of hotels' capacity in Malaysia and 35 percent in Kuala Lumpur has been left idle during these years. According to Figure 1.2, there have been frequent fluctuations in the trend of average occupancy rates of the hotels in Malaysia and Kuala Lumpur due to market uncertainties because of incidents like natural disasters, political disturbances, and terrorism. The most important uncertainties that have taken place in recent years are; the September 11 incident in 2001 (terrorists attack in USA), the epidemic of severe acute respiratory syndrome (SARS) between 2001 and 2003, the increase in the global price of fuel, the global slowdown (2007–2009), and the pandemic of influenza A (H1N1) in 2009. For example, due to the global recession (2007-2009), the average occupancy rate of hotels dropped in the year 2007. With the escalation of the global slowdown in 2008 and the pandemic of influenza A (H1N1) in 2009, hotels faced a further decrease in demand for their services, which consequently affected the average occupancy rates.

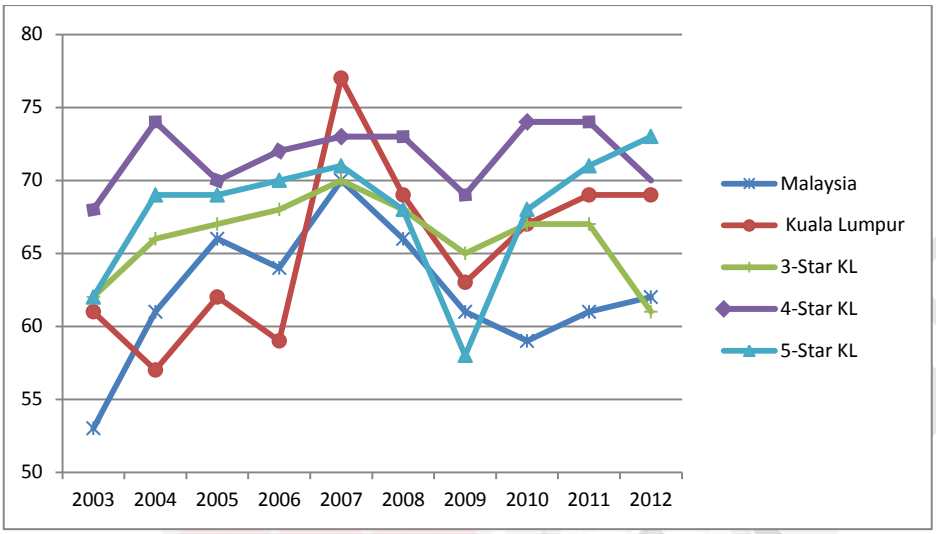

Figure 2-2. Average Occupancy Rate of Hotels
(Source: CBRE Global Research and Consulting, 2012)

On the other hand, the performance of Malaysian hotels has always been influenced by the low level of room rates. Based on Figure 1.3, Malaysia's hotel industry has one of the lowest Average Daily Rates[2] (ADR) in the region (Tourism-Malaysia-data, 2008). According to Ivo Nekvapil (2011), vice president of Malaysian Association of Hotels, Malaysian hotels offered their accommodation services at low rates instead of value for the money from the beginning. Since pricing is based on market force in the hotel industry, room rates of Malaysian hotels have remained at a low level. Figure 1.3 shows that as opposed to all major Asian cities, Kuala Lumpur experienced a decline in ADR, about -0.01 percent, in 2012. This can be attributed to the heightened competition among the hotels due to the growing number of the hotels, particularly international ones. Low room rates as well as under capacity utilization of the hotels in Kuala Lumpur resulted in the low Revenue Per Available Room[3] (RevPAR) in comparison with other tourist destinations in the region such as Singapore, Bali, Jakarta, and Hong Kong (CBRE, 2012).

2. Average Daily Rate ("ADR") is a ratio that indicates the average price for one overnight stay at a hotel. It is calculated by dividing total rooms revenue by the number of rooms occupied.

3. Revenue Per Available Room (RevPAR) is the total hotel room revenue divided by the total rooms available to rent for a day or range of dates.

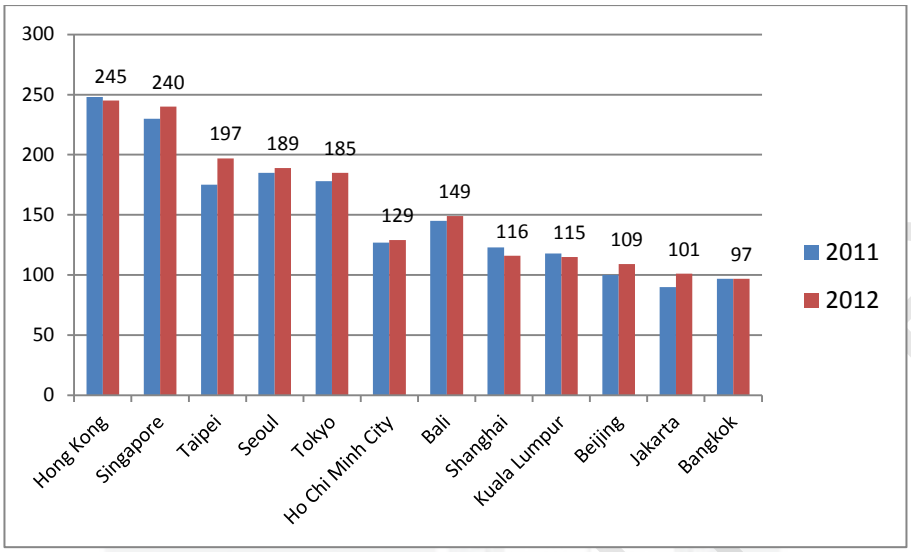

Figure 2-3. ADR in USD in Asian Cities, 2011 & 2012
(Source: CBRE, 2012)

Due to the perishable supply and the uncertain demand of hotel services, hoteliers normally face challenges in coordinating demand and supply. Accordingly, managing marketing activities of hotels in an efficient and effective way is extremely important. Using efficient and effective marketing activities, hotels would be able to attract customers, keep them, and consequently improve their profit levels. In the highly competitive market of three- to five-star hotels in Kuala Lumpur, hoteliers normally spend substantial amounts of money on different marketing activities to attract more customers and increase their occupancy rates. They also pursue a price differentiation strategy formulated based on the idle capacity and demand levels. Many of them frequently cooperate with website companies and travel agencies to promote competitive and preferential rates. For instance, discounts offered through online reservations can even ranges from 80 to 95 percent, and those offered by travel agencies can be as high as 65 to 85 percent (Chiu & Huang, 2011).

1.2 Problem Statement

During the years 2003 to 2012, on average, 35 percent of three- to five-star hotels' capacity in Kuala Lumpur were idle. This idle capacity represents under capacity utilization which resulted in the loss of potential revenue (Knowles, 1998) and indicates the inefficiency of the industry. Hence, this shows that three- to five-star hotels in Kuala Lumpur are operating inefficiently. Kim (2011) studied the performance of the hotels in Malaysia from 2002 to 2004 and found that the hotels operated inefficiently during the period under study.

Malaysia's hotel industry has shown tremendous growth in room supply during the last few years which has increased concerns about potential oversupply. With the increasing levels of globalization in the twenty-first century, it is becoming increasingly difficult to ignore the effect of frequent uncertainties on the performance of the industry. These uncertainties mostly cause an abrupt reduction in the demand of hotel services and thus decreased capacity utilization. Therefore, the potential oversupply and the uncertain demand of hotel services may further intensify the under capacity utilization (i.e. low occupancy rate) and inefficiency of the hotels.

The average room rate of hotels in Malaysia is known as one of the lowest in the region. Moreover, the growing number of hotels and room supply in the industry, particularly in the three- to five-star hotel segment in Kuala Lumpur, has caused hoteliers to face price competition among themselves. This competition becomes more intensified with the entrance of more international hotels in this segment, which are usually able to lower the cost of operation. In such a competitive market, some hotels even agree to cut room prices so as to increase occupancy rates in order to survive such competition (Gray & Liguori, 1996). The effect of the low room rate and the under capacity utilization reflected in the Revenue Per Available Room (RevPAR) of these hotels, will hence lead to low level of profitability.

Van Dyke (1985) postulated that long-lasting inefficiency in renting rooms results in poor performance of hotels that can lead to their immediate exit from the market. Since hoteliers have little or no control over room rates, market uncertainties, oversupply of hotel rooms plus growing competition, in order to be more efficient and competitive, they should focus their attention on minimizing input excesses and output shortages (i.e.under capacity utilization).

Due to the perishable nature of hotel services, all of what is produced by hotels may not be sold in practice. Therefore it would be more informative if one jointly analyzes efficiency of hotels in both the production process (i.e. service production efficiency) and sales/consumption process (i.e. service consumption effectiveness) in order to consider the non-utilized portion of production in the performance analysis of hotels. Despite its importance when evaluating hotel efficiency, too little attention has been given by researchers to this fact (Chiu & Huang, 2011; Hsieh & Lin, 2010; Keh, Chu, & Xu, 2006; Yu & Lee, 2009). Also, to date, no research has been conducted to survey efficiency and effectiveness of the Malaysian hotel industry, specifically the three- to five-star hotels in Kuala Lumpur. Kim (2011) recently evaluated the technical efficiency of Malaysian hotels without incorporating the perishable nature of hotel services in the analysis.

In the case of the hotel industry, one of the main environmental factors believed to contribute to the low-efficiency issue is hotel location (Assaf, Barros, & Josiassen, 2010; Wang, Hung, & Shang, 2006). Past studies have evaluated the effect of location on efficiency of hotels in terms of urban or suburban locations (e.g. Shang et al., 2009; Wang et al., 2006), but the effect of agglomeration of hotels in a geographical location on hotel efficiency has been completely neglected. Due to the perishability of hotel services, it is common that hotel companies agglomerate in convenient locations to

benefit from heightened demand of agglomeration externalities. However, proximity of hotels in a physical location enhances price competition; and the heightened competition decreases rents for all (Chung & Kalnins, 2001; Tsang & Yip, 2009). Therefore, agglomeration may intensify the effect of low room rates on the hotels' profitability which can worsen their performance. Consequently, it is imperative to examine the trade-off between agglomeration benefits and competition losses in Kuala Lumpur's hotels.

In the case of hotel operation, fixed costs are usually very high; thus the marginal cost for offering an additional service is relatively low relative to the existing capacity. Consequently, hotel managers tend to focus on attracting more customers to increase occupancy rates. Since fixed costs such as rental and utilities are rather inflexible, usually the marketing expenses are among the first costs selected to be cut down (Weber, 2002). Efficient marketing activities could improve under capacity utilization of hotels and lead to optimized performance. On the other hand, in the highly competitive current market of three- to five-star hotels in Kuala Lumpur, hoteliers offer promotional discounts to increase their occupancy rates. Although, promoting the preferential prices leads to more customer bookings and higher occupancy rates, hotels may face higher marketing expenses and lower profit margins (Chiu and Huang, 2011). Therefore in the highly competitive market of the three- to five-star hotels in Kuala Lumpur, it is essential that hotels measure efficiency and effectiveness of marketing in order to review their market position. Determining the right size of marketing spending and optimal occupancy rate would help them achieve higher profitability level.

1.3 Objectives

The general objective of this study is to evaluate the relative performance of three- to five-star hotels in Kuala Lumpur in terms of efficiency measures in order to identify the main sources of inefficiency. In line with the general objective, a well-designed model is employed to measure efficiency and effectiveness of the hotels based on Data Envelopment Analysis (DEA). Henceforth, the specific objectives of the study are as follows:

1. to measure efficiency and effectiveness of the hotels in order to identify the main sources of inefficiency
2. to examine the effect of agglomeration on efficiency of the hotels in order to identify the environmental sources of their inefficiency
3. to measure efficiency and effectiveness of marketing in order to identify the relative optimal values of marketing expenses, occupancy rates, and profits.

1.4 Significance of Study

The tourism industry is the second-largest foreign-exchange earner in Malaysia (Tourism-Malaysia, 2009). The importance of this industry has been highlighted in the Malaysian Third Industrial Master Plan (IMP3). Based on IMP3, the government

identified the tourism industry as one of the eight services subsectors that should be focused on for further development during this plan period (IMP3-Malaysia, 2006-2020). According to the ninth Malaysian plan (2005-2010), the tourism industry has been targeted to be efficient in the production process and utilization of assets. Among the different subsectors of this industry, the hotel sector receives, on the average, 31 percent of tourist travel expenditures (Tourism-Malaysia, 2009) which highly contributes to the tourism industry's revenues.

Currently, one of the greatest challenges that the hotel organization has to face, is the increasing competition due to the globalization. In such a competitive market, hotels must sustain growth to remain competitive. Otherwise, they will not able to survive in the long run. Therefore, to examine the relative performance of hotels in order to improve resource allocation based on the recommendations of the benchmarks is crucial. Besides, the findings of the study could help policy makers formulate more effective policies resulting in the industry growth.

1.5 Organization of the Study

To attain the objectives specified in the current chapter, the remainder of this study is arranged as follows: chapter 2 presents a brief presentation of the general characteristics of services provided by service firms as well as unique features of hotel services and operations. Then, theoretical framework on different measures of efficiency, and the relevant empirical evidences are reviewed. Chapter 3 is devoted to the methodology and specification of the models. Chapter 4 presents empirical results and analysis. Finally, conclusions with strategies and policy recommendations are provided in Chapter 5.

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