Service Delivery System Practices in Malaysian Hotel Operations: An Exploratory Study

MOHD RIZAL RAZALLI

College of Business Universiti Utara Malaysia

ABSTRACT

A hotel's service delivery system is unique because it produces products as well as services. Prior research in this area is still scarce especially in the context of the Malaysian service industry. This paper investigates the extent of service delivery system practices in Malaysia's hotels. In doing so, a questionnaire was sent to all 474 star-rated hotels in Malaysia. A response rate of 19% was received. By using factor analysis and descriptive statistics, the results indicated that the extent of hotel service delivery system could be measured by the following seven dimensions – new products/services, customer participation, hotel operations layout, push/pull orientation, level of standardisation, use of Information Technology (IT), and human resource specialisation. Furthermore, on each dimension, managers of hotels perceived that their hotels had high introduction of products/services, high customer participation for service adaptation, mixed operations layout, pull orientation, high standardisation of processes, high use of IT for cost reduction, and low human resource specialisation.

Keywords: Hotel operations practices; service delivery system.

ABSTRAK

Sistem penyampaian perkhidmatan untuk sesebuah hotel adalah unik kerana ia mengeluarkan produk dan juga perkhidmatan. Kajian terdahulu dalam bidang ini masih lagi tidak mencukupi terutamanya dalam industri perkhidmatan di Malaysia. Penulisan ini menyelidiki tahap amalan sistem penyampaian servis hotel di Malaysia. Untuk tujuan itu, satu soal selidik dihantar kepada semua 474 hotel yang mempunyai taraf bintang di Malaysia. Kadar respon yang diterima ialah 19%. Dengan menggunakan kaedah analisis faktor dan statistik huraian, hasil kajian menunjukkan tahap sistem penyampaian servis di hotel boleh diukur dengan tujuh dimensi berikut – produk/servis baru, penglibatan pelanggan, susun atur operasi hotel, orientasi menolak/menarik, tahap keseragaman, kegunaan teknologi maklumat, dan pengkhususan sumber manusia. Seterusnya, dari segi setiap dimensi, pengurus hotel telah menyatakan bahawa hotel mereka mempunyai tahap pengenalan produk/servis yang tinggi, tahap penglibatan pelanggan untuk adaptasi servis yang tinggi, susun atur operasi yang bercampur, orientasi menarik, tahap keseragaman proses yang tinggi, tahap kegunaan IT yang tinggi untuk tujuan pengurangan kos, dan tahap pengkhususan sumber manusia yang rendah.

Kata kunci: amalan operasi hotel; sistem penyampaian perkhidmatan.

INTRODUCTION

The Malaysia's hotel industry is growing. Overall, this industry showed an upward trend until the onset of the Asian financial crisis in 1997, SARS and the US-Iraq war in 2003 (Poon & Low, 2005). Since 1980, the number of hotel rooms had increased from 26,173 to 45,032 in 1990 (Goldsmith & Mohd Zahari, 1994). By 2004, there were 151,135 rooms available in Malaysia (Tourism Malaysia, 2007). In terms of number of hotels available, there were 2,224 hotels in 2004 compared to only 1,404 hotels in 1999 (Tourism Malaysia, 2007). However, not all of these hotels were given ratings by the Ministry of Tourism. Even though these statistics showed a promising growth of the Malaysia hotel's industry, this industry operates in a business environment that is characterised by intense competition and high uncertainty (Ong, 2004). Therefore, the right practices to manage hotel business are critical in allowing the hotel to best exploit its competencies relative to opportunities in the external environment. This means that firm's internal environment, in terms of resources and capabilities could provide the basis for practice and ultimately influence the firm's performance (Hitt, Ireland, & Hoskisson, 2001). As a matter of fact, the emphasis on the internal capabilities or core competencies to respond to the environment is a must for an organisation due to the inconsistency of the marketplace (Espino-Rodriguez & Padon-Robaina, 2004). These internal capabilities would help hotels to better respond to changes either from external or internal challenges. This paper focuses on the internal capabilities of hotels related to Operations Management (OM) or also known as the service delivery system. Despite the importance of operations practices in managing hotels, little is known about the extent of these service delivery system practices. This contention has been supported by Menor, Roth, and Mason (2001) who argued that service operations practices need to be further explored due to scarce research in this area. Furthermore, the current practices which uses the hotel star rating as the main guidance for grading the practices of hotels in Malaysia are inadequate(Lau, Akbar, & Fie, 2005). In Malaysia, the main criteria for star rating include qualitative and aesthetic requirement, common areas, bedroom requirements, service, safety standards and hygiene, and staff (Ministry of Culture Arts and Tourism Malaysia, 2004). Most of these criteria, however, only reflect the tangible practice of the hotels. The overemphasis on ratings could be misleading as hotels can get a high rating because they fulfill the criteria in terms of physical aspects (Briggs, Sutherland, & Drummond, 2007). Hence, the question remains - what is the extent of current operational practices (tangible and intangible practices) in Malaysia's hotel operations? This study aimed to provide answers related to this research question, that is to examine the extent of operational practices in hotels.

OPERATIONS DELIVERY SYSTEM

Taxonomies and typologies are used by past researches to understand and categorise the operations delivery system of an organisation. For example, Bozarth and McDermott (1998) showed different taxonomies and typologies for purpose of configurations in operations within the manufacturing sector. Further work had been undertaken by Christiansen, Berry, Bruun, and Ward (2003). Minor, Hensley, and Wood (1994), and Dangayach and Deshmukh (2001) reviewed 260 papers related to operations delivery systems and categorised research in this area into two groups - process and content related aspects. Content-related literature addresses issues of competitive priorities such as costs, quality, delivery dependability, delivery speed, flexibility, and innovation aspects. It includes issues related to manufacturing capabilities, strategic choices, best practices, trans-national comparison, literature review, and performance measurement. Meanwhile, process aspect is related to pattern or procedure in which the organisation's operations are designed, developed, and implemented (Dangayach & Deshmukh, 2001). Example of process formulation of manufacturing operations was further illustrated by Menda and Dilts (1997). The current study, however, was more related to content-related aspect because it deals with the issue of capabilities and best practices.

Note that the operations of service organisations and manufacturing firms are different (Haksever, Render, Russell, & Murdick, 2000). The above configuration studies were developed from the manufacturing setting. Reid and Sanders (2002) stated that there are two primary distinctions between manufacturing and service organisations. Firstly, the production of the product and secondly the level of customer contact. Pure manufacturing organisations produce a tangible product that can be stored in inventory, while pure service organisations produce an intangible product that cannot be stored. Additionally, pure manufacturing organisations have no direct contact with customers, while pure service organisations have high direct contact with the service provider (Reid & Sanders, 2002). Meanwhile, Silvestro, Fitzgerald, Johnston, and Voss (1992) classified processes in service operations as professional service, mass service, and service shop. Professional service are those organisations with relatively few transactions, highly customised, process-oriented, with relatively long contact time, with most value added in the front office (Silvestro et al., 1992). Mass service, on the other hand, include organisations that have many customer transactions, limited contact time, and little customisation (Silvestro et al., 1992). Finally, the third category, service shop, falls between professional service and mass service (Silvestro et al., 1992). Hotels utilise service shop processes categorised by medium usage of people/equipment, contact time, customisation, discretion, front and back office activities, and process and product (Silvestro et al., 1992). Verma and Young (2000) and Arias-Aranda (2002) are two studies that provide configurations for service delivery systems. The next section discusses in detail the service delivery system for service firms, which is the focus of this paper.

Service Delivery System in the Service Operations Despite the widespread acknowledgement of the significance of the service sector, no dominant paradigm exists for structuring service operations. Menor et al. (2001) identified three reasons for the lacking of research in service operations. Firstly, there is a lack of consensus on the definition and classification of service operations. Secondly, measurement of service is still in the pioneer stage. Thirdly, the systematic relationships between

service operations, context, and performance are generally not well understood. Hence, empirical research is still scarce and studies need to be conducted to better understand the service operations. Therefore, this research attempted to study service operations in the hotel industry in order to fill the gap in the current service operations literature.

The service delivery system or operations system of service designs the service package and the delivery system in corporation with marketing, finance, and human resource. Its primary purpose is to create value to customers in terms of quality, price, and time. It consists of equipment and physical facilities, processes, and personnel (Haksever et al., 2000). Following studies in manufacturing and service (Arias-Aranda, 2002; Cox & Blackstone, 1998; Davis, Aquilano, & Chase, 2003; Fitzsimmons & Fitzsimmons, 2001; Gaither & Frazier, 2002; Haksever et al., 2000; Hayes & Wheelwright, 1984; Hill, 1987; Skinner, 1969; Swamidass & Newell, 1987), this study defined service delivery system practices as "the extent of established service delivery system practiced by management in relation to the structure of the operations system of a hotel". Next, the definition of the practices related to service delivery system in operations is discussed in more detail.

Arias-Aranda (2002) identified nine elements for categorising service delivery system in operations. These elements are as follows:

(1) Type of operations layout

Type of operations layout influences the way operations are configured in the service delivery process. Layout refers to the arrangement of resources such as human, machines, facilities, and materials in the hotels. There are two types of operations layout in service: (i) fixed layout and (ii) flexible layout. A fixed layout tends to organise service delivery as a sequential activities process while a flexible layout does not imply tasks done sequentially. This study defined operations layout as "the extent of hotel layouts in the service delivery system".

(2) Push/pull orientation of the service delivery process

Push/pull orientation of the process determines the production philosophy of the service delivery. Pull oriented service firms initially consider customer needs when developing service activities, while push oriented service firms undertake important investments in production capacity in order to satisfy demand. This study defines push/pull orientation as "the extent of hotel orientation in the service delivery system".

(3) Degree of process standardisation

This study defined degree of process standardisation as "the extent to which task procedures are pre-established in the service delivery system" and this decision will influence employee empowerment. It also reflects the extent of the firms in minimising variability in the service delivery process.

(4) Different services offered

The different services offered measures "the extent of diversification of the firm according to the final product/services delivered". This dimension shows how the firm is oriented toward many or few customer segments.

(5) Use of information technology (IT)

IT can be used in order to reduce costs through substitution of workforce by technology or/and it can also be used for final service improvement. This study defined the use of IT as "the extent of IT usage in the service delivery system".

(6) Back and front office activities relationship

Back and office activities can affect customer perception of service delivery. When both are physically separated, information exchange can be difficult and vice versa. This study defined back and front office activities as "the extent of interaction between back and front office activities in the service delivery system".

(7) Human resource specialisation

Human resource specialisation intends to determine personnel versatility. A

more versatile workforce responds more quickly and efficiently to environmental change while highly specialised personnel tend to be more rigid. Hence, this study defined human resource specialisation as "the extent of specialisation in human resource in the service delivery system".

(8) Degree of customer participation

Degree of customer participation is related to the level of interaction between customer and service delivery process. Customer may act as a staff by developing tasks of service delivery which may reduce costs to the company. The customer may exchange information with the service delivery activities so that a more customised service can be developed by the firm. This study defined degree of customer participation as "the extent of interaction between customer and hotel in the service delivery system".

(9) New product/service design and development

New product/service design and development refers to whether or not the firm sets new service delivery procedures through new task organisations and investments in specific resources. This will show the firm intention to innovate in new processes and products/services. This study defined new product/service design and development as "the extent of new product/service and development in the service delivery system".

Based on the above discussion, the research framework for the study is shown in Figure 1.

Service Delivery Systems Practices
Hotel layout
Push/pull orientation
Level of standardization
Different service offered
Use of IT
Back and front office activities
Human resource specialization
Customer participation

Design and development of new product/service

Figure 1: Research framework

METHODOLOGY

The survey method was used to assess the current service delivery system practices of the hotel's industry. The population of this study was the rated hotels (one-five stars) in Malaysia. By the year 2006, there were 474 hotels in Malaysia listed by the Ministry of Tourism Malaysia (Tourism Malaysia, 2003/2004, 2006). The Malaysian Tourism Promotional Board (MTPB) or also known as Tourism Malaysia, categorised five-star hotels as large-sized hotels, three and four-star hotels as medium-sized hotels, and one and twostar hotels as small-sized hotels. The star rating was used for two reasons. Firstly, the availability of the list provided by Ministry of Tourism makes it possible for respondent selection. Secondly, the star rating depicts the variability in operations of the hotels such as rooms, facilities, and staffing (criteria for rating hotels provided by the Ministry of Tourism). A simple random sampling method was used to select respondents because of small number of hotels available in each category of rating. Before selecting the respondents, a number was assigned to each respondent in the list. The criteria to select respondent was the number in the last two digits of the first column of random numbers table (Babbie, 2004). The respondents included managers who were knowledgeable in the operations of hotels. Before sending the questionnaires to hotels, a pilot test was conducted by using in-depth interviews with experts in hotel operations in order to increase the content validity of the measurements in the questionnaire. The feedback of the interviews was used to revise the final questionnaire. Within a four month period, this study had only managed to obtain 88 returned and usable questionnaires (19% response rate). Even though the response rate was low, the number of responses was useful for analysis and similar or even better compared to previous research in operations strategy, such as by Swink, Narasimhan, and Kim (2005) – 57 plants; Morita and Flynn (1997) – 46 plants; Espino-Rodriguez and Padon-Robaina (2004) 50 hotels; and Arias-Aranda (2002) – 71 consulting firms. This low response rate was also not significantly different from other related research such as Christiansen et al. (2003) – 13%; Frohlich and Dixon (2001) -20%; Katuria (2000) -8%; Youndt, Snell, Dean, and Lepak (1996) – 19%; and Miller and Roth (1994) - 20%. In terms of the hotel's profile, there was 6.8% from one-star hotels, 14.8% from twostar hotels, 31.8% from three-star hotels, 26.1% from four-star hotels, and 20.5% from five-star hotels. Most of these hotels had more than 50 rooms and located in the city areas.

The measurement for service delivery system practice was adapted from Arias-Aranda (2002). Following these authors, the constructs was measured by nine indicators namely layout, push/pull orientation, level of standardisation, different services offered, use of information technology, back and front office activities, human resource, customer participation, and design and development of new products. The respondents were asked to indicate their current hotel's service delivery system practices on the scale of one to five (strongly disagree to strongly agree). These practices were analysed based on their agreement to the statements for each dimension of the questionnaire. Table 1 was used to determine the extent of each dimension of service delivery practice.

Table 1: Service Delivery System Practices

Variable	Mean Value Near 1	Mean Value Near 5
Hotel operations layout	Flexible layout	Fixed layout
Push/pull orientation	Pull orientation	Push orientation
Level of standardisation	Low standardisation	High standardisation
Different service offered	Narrow	Broad
Use of IT	Service improving	Cost reduction
Back and front office activities	Close	Separate
Human resource specialisation	Rigid	Versatile
Customer participation	Service adaptation	Cost reduction
Design and development of new product/service	Low	High

Note that Table 1 was used in drawing a conclusion on the hotel service delivery system practices. For example, if the mean value for hotel layout was near 1, this value would suggest that hotels were using flexible layout instead of fixed layout. Similarly, if the mean value for hotel push/pull orientation was near 1, then the hotels participating in this study were using pull orientation instead of push orientation. Similar analysis was applied to the rest of dimensions of service delivery system practices.

DATA ANALYSIS AND FINDINGS

Validity

Besides content validity, the instrument in this study was evaluated for their construct validity through exploratory factor analysis. The factor analysis with Varimax rotation was performed on the variables of the study. A guideline provided by Hair, Black, Babin, Anderson, and Tatham (2006) was used. For cross loading, the criteria used was that the item should load .50 or greater on one factor and .35 or lower on the other factor (Igbaria, Livari, & Maragahh, 1995). Table 2 shows the output of the factor analysis. The results of this analysis showed that the original

nine dimensions of the service delivery system had been reduced to seven dimensions. All factor loadings were above .50 on one factor and .35 or lower on other factors. The eigenvalues for all factors were greater than one. The KMO value was .71 and the Bartlett's test of Sphericity was significant. The seven factors extracted were named as (1) new product/service, (2) customer participation, (3) operations layout, (4) push/pull orientation, (5) level of standardisation, (6) use of IT, and (7) human resource specialisation. Note that most of the named were retained from the original dimensions.

Table 2: Results of Factor Analysis for Best Practices in Service Delivery System

Items	Factor						
	1	2	3	4	5	6	7
Factor 1: New product/service							
There is a procedures book, which is known by all workers.	.705						
Most service delivery activities are oriented towards service customisation.	.737						
The hotel offers a wide range of different services.	.653						
New services are continually offered to customers.	.724						
New procedures for service delivery are continually developed.	.804						
New services are continually developed.	.888						
Customer opinions are indeed considered when designing new services.	.712						
Factor 2: Customer participation							
Service delivery process is designed so customer performs by him/herself those activities he/she is qualified for.		.716					
Customer performs part of the service delivery activities in order to reduce costs.		.748					
Customer is informed in detail about all previous activities he/she has to perform before service delivery.		.683					
Customer knows about costs reductions due to his/her participation in the service delivery process.		.791					
Customer participates in the service delivery process in order to customise service.		.769					

(continued)

Factor 3: Operations layout							
Service delivery activities are performed in a fixed							
place rather than performed where it is more			.842				
convenient for the customer. Resources for service delivery are sequentially							
located rather than they can be moved to those			.812				
places where service is delivered.							
Resources for service delivery are located in order			.686				
to optimise space and maximise efficiency rather than to optimise customer satisfaction			.080				
Resources for service delivery are located in order							
to optimise efficiency rather than to optimise			.640				
final service delivery. Workers assignation has never been made on							
rotation basis.			.564				
Factor 4: Push/pull orientation							
System efficiency goals have priority over							
customer satisfaction goals when designing service delivery process.				.727			
Marketing efforts are made to attract new							
customers rather than service improvement				.784			
efforts are made to increase customer				.704			
satisfaction. Service output is always maximised rather than				(02			
customer satisfaction.				.683			
Factor 5: Level of standardisation							
Service delivery system is designed so there is at least one way to perform every task.					.779		
The service delivery process is standardised to					.631		
reduce change in work procedure.					.031		
Factor 6: Use of IT Workforce is raplaced by new technologies when							
Workforce is replaced by new technologies when possible.						.821	
Customer can send or receive information							
about service delivery through information						.782	
technologies							
Factor 7: HR specialisation							605
Personnel are able to perform various tasks. Personnel are able to perform different tasks							.685 .750
Job rotation is commonly used.							.685
Eigenvalue	6.15	4.64	2.22	1.87	1.55	1.24	1.12
Percentage of variance explained (69.58%)	18.33	11.85	10.97	8.91	6.94	6.35	6.22
KMO	.71						
Bartlett Test of sphericity	1331.1	2					
Sig	.00						

RELIABILITY

The internal consistency test or reliability test was conducted on each factor that emerged from the factor analysis. Table 3 shows the results of the analysis. All values except two dimensions were above the Nunally's (1978) cut-off point of .70. According to Sekaran (2000), alpha values below .60 are considered poor and those in the range of .70 are acceptable. Due to the exploratory nature of this study, the cut-off value of alpha of .60 was still accepted for further analysis.

Table 3: Reliability Test

Variables	No. of items	No. of item deleted	Cronbach Alpha
Factor 1: New product/service	7	-	.88
Factor 2: Customer participation	5	-	.83
Factor 3: Operations layout	5	1	.82
Factor 4: Push/pull orientation	3	1	.77
Factor 5: Level of standardisation	2	-	.60
Factor 6: Use of IT	2	-	.64
Factor 7: Human resource specialisation	3	1	.93

DESCRIPTIVE ANALYSIS

Table 4 shows the mean and standard deviation for the major variables. As shown by Table 4, the means values for all variables were in the range of 2.95 to 4.06, while the standard deviation of variables ranged from .58 to .96.

These variables were assessed using the Likert scale with "strongly disagree (1)" to "strongly agree (5)". The criteria used to determine the level of agreement were as follows: a mean score of less or equal 2.99 was considered as low, while a mean score of 3.00 and above was considered as high. Table 1 was used to determine the extent of each dimension. Note that a few dimensions were no longer available as a result of factor analysis. Specifically, the findings were as follows. Firstly, the descriptive statistics showed that most managers agreed that

their hotels continually offered new products or services (M = 4.02, SD = .58). Secondly, in terms of customer participation, most hotels agreed that the purpose of participating customers in the service delivery system was related to service adaptation rather than costs reduction (M = 2.95, SD = .74). Additionally, the managers agreed that their hotels had a mixed operations layouts (M = 3.09, SD = .80), meaning that some hotels used flexible layouts, while the remaining hotels used fixed layouts in their operations. The orientation for most hotels was more related to pull rather than push orientation (M = 2.53, SD = .96). With regards to the level of standardisation, most hotels had a high level of standardisation (M = 3.67, SD =.67). In addition to the high usage of IT for costreduction purposes (M = 3.68, SD = .81), these hotels also had versatile staff (M = 4.06, SD =.70) in performing the tasks.

Table 4: Descriptive Analysis for Major Variables

Variables	Mean (M)	Std. Deviation (SD)
New product/service	4.02	.58
Customer participation	2.95	.74
Operations layout	3.09	.80
Push/pull orientation	2.53	.96
Level of standardisation	3.67	.67
Use of IT	3.68	.81
Human resource specialisation	4.06	.70

Note: All items used a 5-point Likert scale.

In addition to the overall service delivery practices, a closer examination of the above seven dimensions was done according to the categorisation of hotels. Table 5 shows the results. The findings showed that most of the hotels (one-five star hotels) had high introduction of new product and services, high standardisation of operations, and versatility of human resource. In terms of customer participation, half of the one-star, four-star, and five-star hotels encourage their customers to participate for service adaptation purposes and the other half for cost reduction purpose. For the two and three-star hotels, the

reason for them to encourage customers to participate in service delivery was mainly due to cost reduction. With regard to hotel operations layout, the one-star, two-star, and most of the three-star hotels had a fixed layout while the four and five-star hotels had a mixed layout. Next, for the hotel orientation dimension, it was found that most of the hotels had a pull orientation except the one-star hotels where slightly more hotels had a push orientation. Finally, IT was mainly used for the purpose of cost reduction rather than service improvement by most of the hotels in Malaysia.

Table 5: Service Delivery System and Hotel Star Rating

Variable	Hotel Star Rating (%)					
	1	2	3	4	5	
1 New product/service						
Low	0.00	0.00	7.10	8.70	5.60	
High	100.00	100.00	92.90	91.30	94.40	
2 Customer participation						
Service adaptation	50.00	23.10	35.70	56.50	50.00	
Cost reduction	50.00	76.90	64.30	43.50	50.00	
3 Operations layout						
Flexible layout	16.70	15.40	35.70	43.50	50.00	
Fixed layout	83.30	84.60	64.30	56.50	50.00	
4 Push/pull orientation						
Pull orientation	33.30	53.80	60.70	43.50	72.20	
Push orientation	66.70	46.20	39.30	56.50	27.80	
5 Level of standardisation						
Low standardisation	0.00	7.70	3.60	4.30	11.10	
High standardisation	100.00	92.30	96.40	95.70	88.90	
6 Use of IT						
Service improving	0.00	0.00	7.10	17.40	16.70	
Cost reduction	100.00	100.00	92.90	82.60	83.30	
7 Human resource specialisation						
Rigid	0.00	0.00	0.00	4.30	5.60	
Versatile	100.00	100.00	100.00	95.70	94.40	

DISCUSSION

The main purpose of this study was to examine the extent of the current practices of the service delivery system in Malaysia's hotel industry. However, before answering that research question, factor analysis was used to assess the validity of the adapted instrument. Based on the factor analysis, it is found that the service delivery system in hotel operations can be at least grouped into seven main dimensions namely (1) new product/service, (2) customer participation, (3) operations layout, (4) push/pull orientation, (5) level of standardisation, (6) use of IT, and (7) human resource specialisation. Surprisingly, the interaction between back and front office activities dimension does not have a high loading for it to be considered as an important dimension for the

hotel's service delivery in Malaysia. To answer the main research question, descriptive statistics were used to assess the current practices in the hotel's service delivery system. Firstly, the results showed that the participating hotels are continuously introducing new products/services to their customers. This finding concurs with Victorino, Verma, Plaschka, and Dev's (2005) study who found the importance of customisation of service in the hotel operations. Furthermore, this practice would ensure that hotels are always innovative in the eye of customers. New products/services can be in the form of travel packages, rooms, and food and beverages. Furthermore, the results also showed that all five categories of hotels have high introduction of new products or services offered to their customers.

Secondly, the overall results showed that most of these hotels are using customer participation as their practice to offer more customised services to customers (service adaptation). Nevertheless, a closer look at each hotel category revealed that the use of customer participation for service adaptation occurs mainly at the four-star hotels while the use of customer participation for cost reduction happens at the two and three-star hotels. The results showed that half of the one and five-star hotels involve their customers in the service delivery for service adaptation and the other half for cost reduction. Larger hotels, probably encourage their customers to participate in service delivery because they want to customise their product/services according to their customer's personal needs. Customer participation also means that customer opinions in service delivery are highly welcomed by these hotels. For example, if a customer wants to have a wedding ceremony at the hotel, the needs of the customer will be the main priority rather that offering a standardised service to every customer. However, for a middle range category (two and three-star hotels), it seems like they encourage involvement of their customers solely because they want to reduce their costs.

Thirdly, the findings offered additional insight about hotel operations layout. Layout refers to the arrangement of human, machines, facilities, and materials in hotels. Compared to manufacturing layout, layout for service

organisations such as hotels is unique in terms of the encounter between the customer and service provider (Gaither & Frazier, 2002). Generally, it was found that operations layout of Malaysian hotels to be mixed layouts. In other words, hotels have a combination of layouts of fixed and flexible layouts. Fixed layout emphasises standardisation in order to develop services (Abad-Grau & Arias-Aranda, 2006), while flexible layout emphasises customer's convenience in delivering services. Probably, the hotels have a combination of layouts because they offer both products and services. Their main purpose of layout is to provide guests with comfortable and safe environment, while at the same time allowing hotel staff to keep the hotel operating efficiently to meet the customers' needs (Chon & Sparrowe, 1995). Hence, they will use a combination of layouts to be as efficient as they can, while at the same time try to satisfy customer's needs.

Fourthly, it was also found that hotels are more practicing pull orientation rather than push orientation. The main difference between push and pull orientations is that push orientation places important consideration toward investment in production capacity more than on their customer needs and vice versa (Arias-Aranda, 2002). For example, pure push-oriented hotels would provide amenities and facilities without truly considering their customer needs while pure pulloriented hotels would provide those amenities and facilities according to their customer needs. Pull orientation concurs with other practices such as new products/services and customer participation. Further analysis on the categorisation of hotels showed that pull orientation is being practised by larger hotels (two, three, four, and five-star hotels). One-star hotels have a push orientation probably due to their limited resources.

Fifthly, with regard to the level of standardisation, the finding showed that these hotels have a high level of standardisation in their processes. This means that most of the hotels in this study (one to five-star hotels) have their processes established in advance or better known in the hotel industry as the standard operating procedure (SOP). SOP will determine what exactly a hotel employee should do to perform his/her work. Besides that, the level of standardisation will also

reflect the level of employee empowerment and the extent of the firms in minimising variability in the service delivery process (Arias-Aranda, 2002). In other words, based on this particular finding, most of the hotels in Malaysia tend to have a low level of employee empowerment and variability in their service delivery process.

Next, another dimension of the service delivery system is related to the use of information technology (IT). Technology may create a competitive edge by improving an existing service process in the form of speed, more choices, or increased quality (Haksever et al., 2000). In fact, the findings showed that the use of IT in hotels (one to five-star hotels) are mainly for the purpose of cost reduction rather than service improving. Due to the nature of service in the hotel industry, which demands for human touch, perhaps, IT is used whenever possible to replace employees to reduce costs rather than to improve the services.

Finally, in terms of human resource specialisation, it was found that all five categories of hotels have low specialisation in assigning their workforce. Low specialisation means that the hotels do not have a rigid assignation for staff as found in most manufacturing firms. Rather, the employees are able to perform various tasks. For example, the front office managers can perform the tasks of housekeeping managers. This phenomenon could be attributed to the characteristic of hotel industry itself where interaction between customer and hotel employees is high.

CONCLUSION AND RECOMMENDATION

In conclusion, the study on the service delivery system for Malaysian hotels is still scarce. Therefore, the objective of this study was to fill the gap by attempting to investigate the extent of service delivery system practices in these hotels. The findings showed evidence that the service delivery system of a hotel can be categorised into seven dimensions, namely new products/services, customer participation, operations layout, push/pull orientation, level of standardisation, use of IT, and human resource specialisation.

Specifically, it was found that most hotels in Malaysia are continuously offering new products/services, participating customer for service adaptation, utilising mixed layout and pull orientation, standardising their service delivery processes, using IT mainly for cost reduction, and minimising the needs to specialise their human resource.

The limitation of this study was related to the low response rate. There were only 88 responses (19%) received from Malaysian hotels. Hence, generalisation of the findings should be made with caution. For future research, it is suggested that a study with a larger sample should be done on the impact of all seven dimensions would have on hotel performance. This study would show the importance of each dimension of the service delivery system to the hotel performance. Hotel managers may want to choose best practices that relate to their organisation so that their hotel performance can be improved. Finally, it is hoped that these findings would broaden opportunities for further research in service delivery system in the future.

REFERENCES

Abad-Grau, M.M., & Arias-Aranda, D. (2006).

Operations strategy and flexibility:

Modeling with Bayesian classifiers.

Industrial Management and Data
Systems, 106(4), 460-484.

Arias-Aranda, D. (2002). Relationship between operations strategy and size in engineering consulting firms. *International Journal of Service Industry Management*, *13*(3), 263-285.

Babbie, E. (2004). *The practice of social research* (10th ed.). Belmont, CA: Wadsworth.

Briggs, S., Sutherland, J., & Drummond, S. (2007). Are hotels serving quality? An exploratory study of service quality in the Scottish hotel sector. *Tourism Management*, 28, 1006-1019.

Chon, K.-S., & Sparrowe, R. T. (1995). *Welcome to hospitality: An introduction*. Cincinnati: South-Western Publishing Co.

- Christiansen, T., Berry, W. L., Bruun, P., & Ward, P. (2003). A mapping of competitive priorities, manufacturing practices, and operational performance in groups of Danish manufacturing companies.

 International Journal of Operations and Production Management, 23(10), 1163-1183.
- Cox, J. F., & Blackstone, J. H. (1998). *APICS Dictionary* (9th ed.). VA: Falls Church.
- Dangayach, G. S., & Deshmukh, S. G. (2001). Manufacturing strategy: Literature review and some issues. *International Journal of Operations and Production Management*, 21(7), 884-932.
- Davis, M.M., Aquilano, N. J., & Chase, R. B. (2003). *Fundamentals of operations management* (4th ed.). Boston: McGraw-Hill.
- Espino-Rodriguez, T. F., & Padon-Robaina, V. (2004). Outsourcing and its impact on operational objectives and performance: A study of hotels in the Canary Islands. *International Journal of Hospitality Management*, 23, 287-306.
- Fitzsimmons, J. A., & Fitzsimmons, M. J. (2001). Service Management: Operations strategy and Information Technology (3rd ed.). Singapore: McGraw-Hill.
- Frohlich, M. T., & Dixon, J. R. (2001). A taxonomy of manufacturing strategy revisited. Journal of Operations Management, 19, 541-558.
- Gaither, N., & Frazier, G. (2002). *Operations management* (9th ed.). Ohio: Thomson Learning.
- Goldsmith, A., & Mohd Zahari, M. (1994).

 Hospitality education in Malaysia:
 Filling the skill gap. International
 Journal of Contemporary Hospitality
 Management, 6(6), 27-31.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). New Jersey: Prentice Hall.
- Haksever, C., Render, B., Russell, R. S., & Murdick, R. G. (2000). Service management and operations (2nd ed.). New Jersey: Prentice Hall.

- Hayes, R. H., & Wheelwright, S. G. (1984).

 Restoring our competitive edge:

 Competing through manufacturing.

 New York: Wiley.
- Hill, T. J. (1987). Teaching manufacturing strategy. International Journal of Operations and Production Management, 11(2), 5-13.
- Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2001). Strategic management: Competitiveness and globalization (concepts and cases) (4th ed.). Singapore: South-Western College Publishing.
- Igbaria, M., Livari, J., & Maragahh, H. (1995). Why do individuals use computer technology? A Finnish case study. *Information and Management*, 29(5), 227-238.
- Katuria, R. (2000). Competitive priorities and managerial performance: A taxonomy of small manufacturers. *Journal of Operations Management, 18*(6), 627-641.
- Lau, P. M., Akbar, A. K., & Fie, D. Y. G. (2005). Service quality: A study of the luxury hotels in Malaysia. *Journal of American Academy of Business*, 7(2), 46-55.
- Menda, R., & Dilts, D. (1997). The manufacturing strategy formulation process: Linking multifunctional viewpoints. *Journal of Operations Management*, 15, 223-241.
- Menor, L. J., Roth, A. V., & Mason, C. H. (2001). Agility in retail banking: A numerical taxonomy of strategic service groups. *Manufacturing and Service Operations Management*, 3(4), 273-292.
- Miller, J. G., & Roth, A. (1994). A taxonomy of manufacturing strategy. *Management Science*, 40(3), 285-304.
- Ministry of Culture Arts and Tourism Malaysia. (2004). *Kriteria pengkelasan hotel*. Kuala Lumpur: Ministry of Culture, Arts and Tourism Malaysia.
- Minor, E. D., Hensley, R. L., & Wood, D. R. (1994). A review of empirical manufacturing strategy studies. *International Journal of Operations and Production Management*, 14(1), 5-25.
- Morita, M., & Flynn, E. J. (1997). The linkage among management systems,

- practices and behavior in successful manufacturing strategy. *International Journal of Operations and Production Management*, 17(10), 967-993.
- Nunnally, J. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Ong, J. (2004). *The Malaysian hotel industry:*A brief perspective. Kuala Lumpur:
 Malaysian Association of Hotels.
- Poon, W.-C., & Low, K. L.-T. (2005). Are travellers satisfied with Malaysian hotels? *International Journal of Contemporary Hospitality Management*, 17(3), 217-227.
- Reid, R. D., & Sanders, N. R. (2002). *Operations management*. New York: John Wiley and Sons, Inc.
- Sekaran, U. (2000). Research methods for business (3rd ed.). New York: John Wiley and Sons, Inc.
- Silvestro, R., Fitzgerald, L., Johnston, R., & Voss, C. (1992). Towards a classification of service processes. *International Journal of Service Industry Management*, 3(3), 62-75.
- Skinner, W. (1969). Manufacturing: The linking in corporate strategy. *Harvard Business Review, May-June*, 136-145.
- Swamidass, P. M., & Newell, W. T. (1987). Manufacturing strategy. Environmental uncertainty, and performance: A path analytic model. *Management Science*, 509-524.
- Swink, M., Narasimhan, R., & Kim, S. W. (2005). Manufacturing practices and strategy integration: Effects on cost efficiency, flexibility, and market-based performance. *Decision Sciences*, *36*(3), 427-457.
- Tourism Malaysia. (2003/2004). *Malaysia* accomodation directory. Kuala Lumpur: Tourism Malaysia.
- Tourism Malaysia. (2006). *Accommodation guide*. Kuala Lumpur: Ministry of Tourism.
- Tourism Malaysia. (2007). *Tourism Malaysia statistic*. Retrieved March 23, 2007, from http://www.tourism.gov.my/statistics.
- Verma, R., & Young, S. T. (2000). Configurations of low-contact services. *Journal of Operations Management*, 18, 643-661.

- Victorino, L., Verma, R., Plaschka, G., & Dev, C. (2005). Service innovation and customer choices in the hospitality industry. *Managing Service Quality*, 15(6), 555-576.
- Youndt, M. A., Snell, S. A., Dean, J. W., & Lepak, D. P. (1996). Human resource management, manufacturing strategy and firm performance. *Academy Management Journal*, 39(4).