

## DEMAND-WISE COACH SERVICES FOR THE HOTEL INDUSTRY: A STRUCTURED APPROACH TO OUTSOURCING AND SHARING DECISIONS

Philip Y L Wong <sup>a</sup>, Derek W C Leung <sup>b</sup>, Billy Wong <sup>c</sup>

<sup>a</sup>The Caritas Institute of Higher Education, Hong Kong

<sup>bc</sup>Transport Planner, WBG International Limited, Hong Kong

*Corresponding email: buildinglaw@gmail.com*

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### Abstract

**Purpose** - Hotel industry in Hong Kong is under keen competition and is facing fluctuating demand. Some hotel services which are conventionally provided in-house are under pressure of cost reduction. This paper investigates coach services of hotel industry. What is the background underlying the emergence and potential growth of demand-wise coach services for hotel industry? Would demand-wise hotel coach services be feasible? This paper intends to answer these questions.

**Design/methodology/approach** - A hotel coach service network in Hong Kong was analysed. A new network with shared coach services is proposed and it can be restructured to simulate sharing of hotel coach passenger capacity among a group of hotels, or to assign a fixed number of coaches to more hotels. A demand-wise coach services provision decision diagram is developed.

**Findings** -To determine an optimal coach services provision, it is necessary to integrate all the three types of provision strategy: outsourcing to third parties, providing the services in-house and sharing of coaches with other hotels.

**Research limitations** – On-site traffic data surveys should be carried out to confirm the simplified scenario analysis. The study only considered the trips among hotels in the urban area of Hong Kong.

**Originality/value** -Given the vehicle size and frequency of service, the traffic impact of hotel coaches on the city transport system is significant. The results of the study can be valuable references to hotel managers and transport policy makers in Hong Kong and other countries.

**Keywords:** Coach service, Hotel transport, Shared transport.

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### 1. Introduction

The demand for hotel rooms in Hong Kong has been on an increasing trend due to the increased number of visitors from Mainland China. In 2014, according to the Hong Kong government statistics<sup>1</sup>, there were 47.2 million arrivals from Mainland China. It is an increase of 16.0% compared to year 2013. Since the middle of 2015, the number of visitors from Mainland China to Hong Kong has been reduced by more than 10%. Due to

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<sup>1</sup>[http://www.tourism.gov.hk/english/statistics/statistics\\_perform.html](http://www.tourism.gov.hk/english/statistics/statistics_perform.html)

the fluctuation in the number of visitors, hotels in Hong Kong have to adjust some of their services operation for cost reduction purpose.

The hotel coach fleet becomes a significant burden to the hotel operation in view of the long-term operation cost, human resource and administration support. In addition, the seasonal effect increases the management uncertainty (Sorensen (1999)). Even for a sizable hotel, it is difficult to achieve the economy of scale in managing a fleet of coaches given the constraints of possible coach fleet size and mix against the number of hotel customers. (Golden, et al. (1984))

This paper intends to solve the above problem by investigating outsourcing and shared transport concepts and their applications in hotel coach fleet operation and demand and supply management for coach services. For the rest of this paper, the research problem is to be elaborated from the hotel manager's perspective. Related literatures of logistics, outsourcing and sharing transport were reviewed. Before a conclusion is made, a case of hotel coach services provision is discussed and a demand-wise coach services provision decision diagram is proposed.

## 2. Research Problems

Hotel coach can be considered as a type of public transport due to their similarity in supply, economic and travel characteristics. Hotel coach services may be provided by small, medium or large hotels or their contractors. In Hong Kong, most hotel coaches are of medium size of 16-20 seats (as shown in Figure 1). According to the legislations of Hong Kong<sup>2</sup>, tour service, hotel service, international passenger service and contract hire service should operate as non-franchised public bus.



Figure 1: A hotel coach in Hong Kong

The choice of transport is influenced by several factors, such as individual characteristics and lifestyle, the type of journey, the perceived service performance of each transport

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<sup>2</sup>Road Traffic Ordinance (Chapter 374) and Public Bus Services Ordinance (Chapter 230)

mode and situational variables (Beirao& Cabral (2007). According to our survey, hotel customers often choose hotel coach due to their lack of local transport information and convenience. Provision of hotel coach service is important to customers who visit a country for the first time. Therefore, it is necessary to implement an efficient coach service plan. In this research, we assume the service plan to be static. We have proved that the current provision of hotel coach service in Hong Kong is ineffective in view of its services frequency and cost involved. This research investigates the ways to improve the cost effectiveness in hotel coach service provision by assisting hotel managers answering the following questions:

1. How large is the demand for the service and what is the level of service required?
2. How should the services be provided: outsourcing or via in-house staff?
3. Can hotels share the provision of hotel coach service to improve the cost effectiveness?

Before the above questions are considered, the hotel management should assess their current hotel coach service.

### **The Current Hotel Coach Service for Customers**

Many hotels in Hong Kong provide free coach services for their customers. A survey about hotel coach service in Hong Kong was carried out in December 2015 through internet and phone. The survey covered 5 four-star and 5 five-star hotels out of a total of 100 four-star and 33 five-star hotels. The current hotel coach services provided by Hong Kong's four-star and five-star hotels are with the following characteristics:

#### Between airport and hotels

1. Most of the coach services between airports and hotels are outsourced to third party contractors. Usually, the coach picks up different hotel customers at the airport and drops them at designated hotels; vice versa.
2. The drivers are not hotel employees.
3. The services schedules are fixed based on the agreement between the hotels and contractors.
4. Most hotels provide the services free to their customers.

#### Between hotel and other destinations

1. Most hotels own one or more coaches with their hotel logo and name on the vehicle body.
2. The drivers are hotel employees.
3. The services schedules are fixed without assessment of trip demand.
4. Most hotels provide the services free to their customers.

From a transport planning point of view, when assessing the transport services provision, the hotel manager must estimate the demand in quantity and service level to decide the frequency, destinations and route. Passengers seldom visit hotels by appointment and are rarely picked up by coach as scheduled. Ideally, the coach is available when requested or needed (Sheehan (2013)). Given the random nature of the hotel services demand, we propose a new management approach for hotel managers.

If the demand is minimal, hotel manager can consider not providing a coach service. The coach services demand may change by charging fare. Hotel coach services can be provided through the following options:

- Outsourcing to third parties;
- Sharing with other hotels;
- Providing through internal resources.

### **3. Literature Review**

#### *Demand Assessment: Coach Services for Hotel Customers*

Assessing the demand for coach services is an important task for hotel operation. Similar to the demand for public transport, hotel coach services may be used for a range of purposes (e.g. sightseeing, business site visit, etc.) and are consumed by people of all ages, with different levels of income and from different countries. Apart from the number of passengers per unit of time, the demand assessment should cover the following (Balcombe et al. (2004)):

##### Nature of passengers' trip

Are the trips personal, business or recreational?

##### Classification of passenger transport modes in demand (Horn (2002))

Are the hotel customers looking for free-range transport modes? E.g. Taxi.

Is there any other scheduled fixed-route transport (e.g. Bus, rail.)?

The information is important in deciding if the services can be outsourced and the nature of third party transport contractors to be chosen.

##### *Outsourcing to third parties*

Outsourcing is not new to hotel industry. Lamminmaki (2011) investigated the motivating factors of outsourcing and insourcing in hotel industry. Outsourcing decisions in hotel industry are complicated due to its operation and service level requirements. Such complicated outsourcing decisions may not apply to coach services provision since third party transport service contractors have already provided coach services between the airport and hotels. Hotel managers may negotiate with the current contractors about services between hotel and other destinations. With the expertise of the transport service contractor, hotel managers may save the cost on fleet management for coach services. According to another study of hotel outsourcing in Spain by Espino-Rodriguez (2005), transport services was not a popular item of outsourcing in hotel industry given its complexity and risk in operation: Licensing, insurance, safety, vehicle parking and maintenance, etc.

In negotiating the outsourcing agreement, with reference to Lamminmaki (2011), the hotel managers are often motivated by flexibility, cost reduction and capital outlay avoidance. Other related advantages of outsourcing the coach services include: enhanced

satisfaction of services, focusing on core services, sparing resources for other purposes, obtaining professional skills, etc.

Another distinct advantage of outsourcing coach service for hotel managers is that the peak seasons of hotel industry are long holidays, during which the transport service contractors often have idle coaches. Hotel managers can negotiate more favorable outsourcing terms.

#### *Sharing coach services with other Hotels*

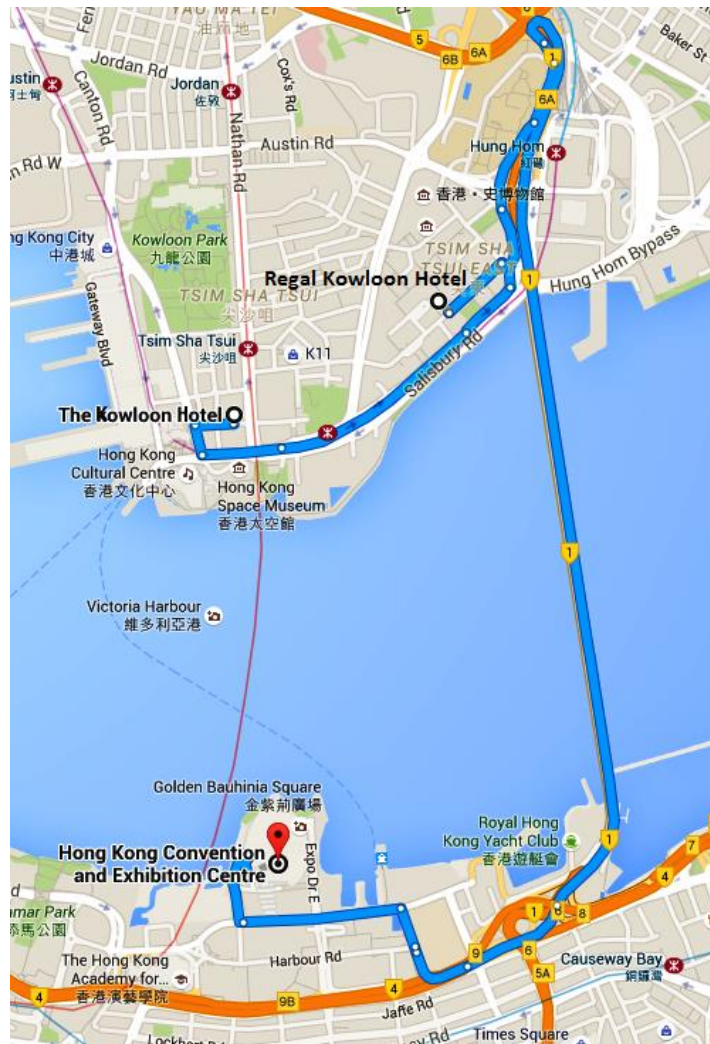
Apart from outsourcing, the hotel manager may consider sharing coach services with other hotels. Sharing this service means to make a joint use of transport resources between passengers and flow of goods. With reference to Trentini and Mahl  n   (2011), the elements characterizing the sharing hotel coach services are:

- Physical flows of passengers at an acceptable services level
- Urban transport operators, companies that provide the coach services, operating a fleet of vehicles. They may or may not be regulated by authorities.

### **4. Methodology**

The case study method is used to validate the proposed transport sharing concept. The research assessed an existing case of two hotels' coach services provision and route planning. It took into account all available information from the hotels to their customers. From transport planning point of view, we proposed another plan by coach sharing which enhance the management flexibility and, from the hotel management perspective, a decision diagram is suggested.





Map 1: Locations of The Kowloon Hotel, Regal Kowloon Hotel, Hong Kong Convention and Exhibition Centre (Source: Google Map Data 2016)

## 5. Data Analysis

### Existing Scenario

Kowloon Hotel and Regal Kowloon Hotel are both 5 stars' hotels in Kowloon district of Hong Kong. Currently, each hotel assigns a coach running between the hotel and The Hong Kong Convention and Exhibition Centre, Coach A and Coach B respectively, as illustrated in Figure 2. The travelling times to the destination from The Kowloon Hotel and from Regal Kowloon Hotel are 27 and 24 minutes respectively (during non-peak hours). The locations of hotels and the destination are shown in Map 1.

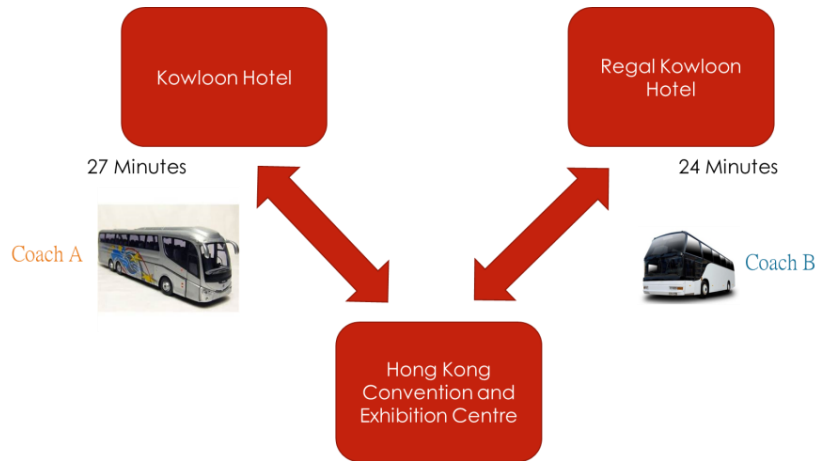


Figure 2: Coach Services without sharing

The current coach service time schedule from 2.00pm to 5.00pm is illustrated in Table 1. Both hotels assign one coach to the destination. It takes nearly one hour to finish one journey from the hotel to the Hong Kong Convention and Exhibition Centre and then return.

Table 1: Coach Time Schedule (without coach sharing)

Start from Kowloon Hotel (Coach A)	Start from Regal Kowloon Hotel (Coach B)	Arrival time Hong Kong Convention and Exhibition Centre (C)
1400	1400	1430
1500	1500	1530
1600	1600	1630
1700	1700	1730

### The Coach Sharing Scenario

After coach sharing as illustrated in Figure 3, the time schedule can be adjusted as shown in table 2 and the level of services (in terms of departure frequency and headway) is improved as illustrated in table 3, with the same amount of resources. The travelling time between the two hotels is 9 minutes (average travel time by a coach). The departure frequency is increased by 50% (i.e. from 4 to 6) while the headway is enhanced by 33% to 50% (i.e. from 1 hour to 30 – 40 minutes).

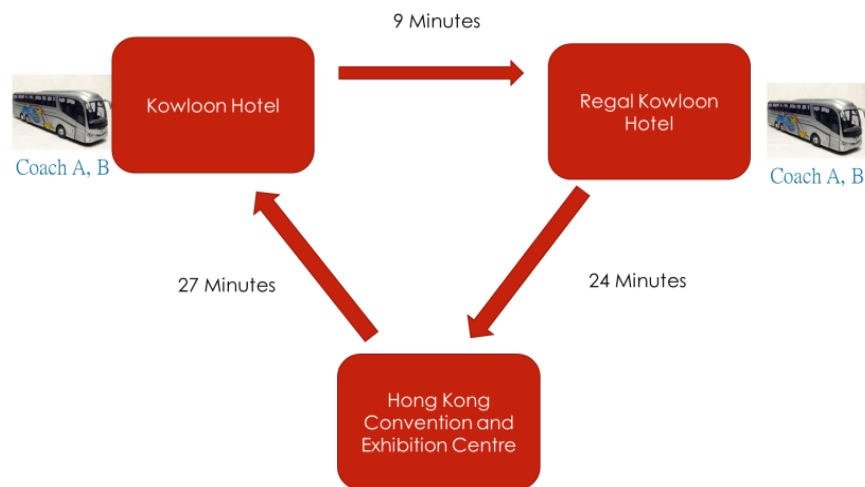


Figure 3: Sharing Coach Services

Table 2: Coach Time Schedule (with coach sharing)

Coach	Start from Kowloon Hotel	Start from Regal Kowloon Hotel	Arrived Hong Kong Convention and Exhibition Centre
A	1400	1410	1440
B	1430	1440	1510
A	1510	1520	1550
B	1540	1550	1620
A	1620	1630	1700
B	1650	1700	1730

Table 3: A comparison of the two scenarios (without and with coach services sharing)



Start from Kowloon Hotel (without sharing)	Start from Kowloon Hotel (with sharing)
1400	1400
	1430
1500	1510
	1540
1600	1620
	1650
1700	

With an excess capacity in the service sharing scenario, the hotel managers may reduce the service frequency subject to the actual demand during the peak and non-peak hours. Shared transport services have also been proved viable in other industry (Taylor & Valenzuela (2001)) and it helps reduce the impact to the communal environment.

Despite the benefits of service operation and environment protection, it may take time for hotel managers of different hotels to negotiate about the cost, asset and liability sharing and design an agreed routing plan and schedule. A professional transport planner or a logistic consultant may be involved during the negotiation and routing design. Therefore, hotel managers may prefer the outsourcing the service to sharing. It should not be surprised that, subject to the consent of individual hotel manager, the coach service provider, who serves more than one hotel in the same neighborhood with the same destination, will take the sharing strategy (*The Outsourcing and sharing scenario*).

### Selection of Coach Services for Hotel Customers

After coach services demand is assessed, the hotel managers may source the suitable services providers in the market in view of the number of customers, service levels. Through outsourcing, hotel managers may benefit from cost reduction and the contractor's expertise. Without a suitable services contractor, a hotel manager may choose to share the coach services with other hotels. A decision diagram is illustrated in Figure 4. It is possible that the coach service contractors may initiate coach sharing proposals to the hotel managers for cost saving. In his consideration of the outsourcing and -sharing proposal from the contractor, the hotel manager should take into account of the trade secret issues.

To determine an optimal strategy for coach Services, a hotel manager may find it necessary to integrate all the three options (outsourcing, sharing, and provision through in-house resources) facing different business situations. The business situation may vary due to different seasons, economic conditions or government's regulations.

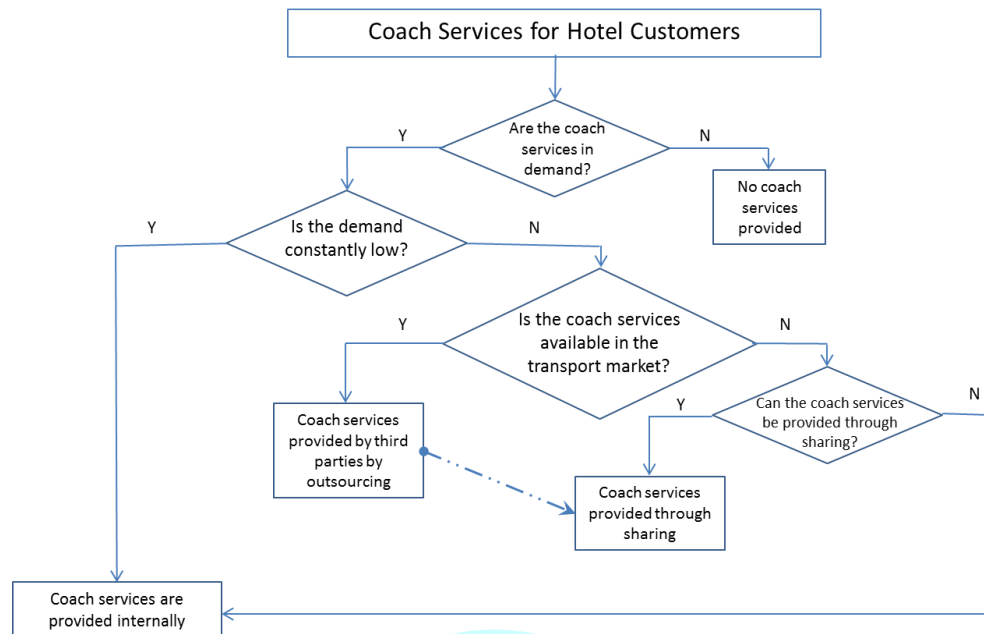


Figure 4: A Decision Diagram: Provision of Coach Services for Hotel Customers



Figure 5: A simplified hotel coach service plan development process (The outsourcing and sharing scenario)

Figure 5 provides a simplification of the service plan development process, with reference to Dios Ortuzar and Willumsen(2011), and the roles of the three parties: hotel

manager, transport planner and services contractor (if any). We look at each stage in turn:

**Demand assessment:** The hotel managers, with the assistance of traffic planner, assess the coach service demand. Information may be collected from surveys from potential customers. Risks, internal resources and financial information should also be considered at this stage for tender preparation.

**Coach Service market search:** There are numerous coach services providers in the market. They may offer a wide range of coach services for school children, leisure trips, etc. Hotel managers should identify their potential qualified providers according to the advice from transport planners.

**Bidding and negotiation:** Potential qualified providers are invited to submit their tenders according to offer provided by the hotel. Negotiation may be started regarding cost and risk sharing.

**Financial close:** Upon the contract is made between hotel and service providers, hotels and coach service providers are committed to share the risk and financial liability. The provider should ensure the service quality as the agreed level.

**Initial operation:** During the initial stage of the operation, both hotels and services providers review the service. On-site survey may be carried by the transport planner for review purpose.

**Maturity:** When the services operation is fully developed, the involved parties may investigate the possibility of services sharing.

### **Conclusion**

This paper has demonstrated the feasibility of a novel decision making methodology of hotel coach service provision from the view of hotel managers. The proposed methodology consists of a decision diagram that optimizes the options of outsourcing, sharing, and provision through in-house resources. Moreover, a simplified service provision development plan, by adopting a multi-agent function, is suggested. The methodology is developed based on a real case in Hong Kong. In which, road traffic condition and services data available to coach customer were taken in account.

It is concluded that hotel managers may need to provide the coach service through outsourcing, sharing and in-house resources depending on different business situations. They need to work with transport planners and coach service providers to enhance the cost-effectiveness of the coach service.

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