

HOTEL TRIP GENERATION IN TOURISM CITY (CASE STUDY: BANDUNG CITY, INDONESIA)

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ABSTRACT: *Hotel trip generation in Bandung has its own peculiarities as a sightseeing trip. Different from a working trip, hotel users usually have a budget that is more adequate than other trips, users don't mind about travel cost, distance or time achievement for it. This paper discusses the rise throughout the hotel in Bandung, regarding occupancy on weekdays and holidays, relationship with floor area, number of rooms and tariffs offered. The results showed that the room occupancy strongly related to the number of rooms, especially for the holidays. The mode that is used varies from private vehicles, public transport, trains and rental vehicles.*

Keywords: Hotel, Trip Generation, Tourism City

1. INTRODUCTION

Calculation of trip is the first step to transportation planning four stages (four stage model) and impact analyzes of traffic to a development plan, hence the calculation of the analysis of trip generation is becoming the most important thing in transport planning and land use [1]. Trip generation estimates were developed based on the idea that Floor area is only one among many factors that influence vehicle trips at a site, and we should not expect floor area or any other single variable to accurately predict the number of vehicle trips at any site or land use [2]. ITE report that Trip Generation is the number of vehicle trips as a function of land use. Transportation engineers survey the number of vehicle trips to and from a variety of locations, and for each land use the ITE reports a trip generation rate that relates the number of vehicle trips to a characteristic of the land use, such as the floor area or number of employees at a site [3].

Criticism for all methods of trip has been submitted by [4] that the theory of a trip by space, stated that humans make the trip according to their needs, not because the relationship area development (diversity and design of the building). Hotel trip generation has its own peculiarities due to hotel users motives to make a trip. In recent years, tourism is regarded as the world's biggest and fastest growing industry. It has been playing a pivotal role in the socio- economic sectors of the most of the developed as well as developing countries of the globe [5]. The travel and tourism industry is a part of the hospitality industry, which is largely considered to be a service industry [6]. Since tourism involves the consumption and purchase of goods and services, it impacts on many sectors of the economy [7].

Forecasting hotel trip generation is not only affect transportation and land use, forecasting future hotel guest arrivals and occupancy rates is a key aspect of hotel revenue management [8]. Accuracy is particularly important when forecasting tourism demand on account of the perishable nature of the product, the majority of articles which are concerned with tourism demand forecasting are econometric studies. (In fact, although such studies often suggest that the econometric models developed may be used for forecasting purposes, the models are usually not used to generate forecasts which are then evaluated in terms of accuracy.)

Other quantitative forecasting techniques which actually have been used in tourism situations include spatial models (particularly gravity models) and time-series models [9]. Recent research by C and Gu [10] identifies the location of tourism trips within the growing notion of tourism mobilities where destinations may be multi-use places and spaces.

In domestic tourism, the car is now the most important mode of transport for tourists travelling to, and within, a destination [11]. The simple generation model considered here is an efficient predictor of the number of weekend pleasure trips from the north of England to the Lake District. The model included the assumption, however, that the attraction of a National Park would vary according to the strength of competing opportunities for recreation and relative travel costs to other area [12]. Automobile travel has developed into a separate form of travel with its own network of interrelated institutions, including drive tourism maps, automobile associations and even accommodation in the form of motels which were developed specifically for those on a motoring holiday [13]. Based on Olsen's definition [14], the drive tourism is defined as individuals "traveling away from home for at least one night, on holidays or visiting friends and relatives, in their own, a rented or borrowed vehicle as the primary mode of transport". One of the essential characteristics of drive tourism is its nature of multiple destinations, as self-driving tourists develop their own personal itineraries. Ultimately, self-driving trails can develop into themed touring routes [15].

It is reported that travel demand growth within a specific corridor tends to be greater than the expected travel growth after new capacity is added (e.g. [16-17]). Travel demand growth is probably not only influenced by factors such as income and population growth, but also by the improvement in the travel environment. According to the economic theory of supply and demand, any reduction in the cost of goods will result in an increase in the demand for the goods. With improved socio-economic conditions (e.g., population growth, increases in income, the development of a regional economy), the travel demand curve shifts. Meanwhile, improvements in travel conditions such as increases in travel speed and decreases in travel cost will result in a reduction of generalized cost shifting the supply curve. Therefore, travel

demand growth is affected by both exogenous factors that determine the location of the demand curve (e.g., increase in population, economic development) and endogenous factors that determine the price-volume point along the demand curve (e.g., reductions in travel time and travel cost) [18].

The study about traveller's perception found that different perceptions exist between business travellers and vacation travellers towards hotel service in terms of different demographics, such as gender, age and nationality. In terms of overall hotel facilities, vacation travellers showed no significant differences between gender groups and factors. With regard to age, vacation visitors in the 18-24 years age group perceived all three factors in terms of overall hotel facilities to be more important than other age groups. Also, vacation travellers with different nationalities perceived parking, food service and security issues in different way. For business travellers, the results showed that males perceived parking, food service and relaxation to be more important than females. With regards to age, the business travellers in the 18-24 years age group perceived all services in the three factors in terms of overall facilities to be more important than business travellers in other age groups. Also, business travellers with different nationalities perceived nearby shopping, nearby entertainment, choice of restaurants, easy access to traffic, quietness and cleanliness in different ways [19]. One noteworthy indicator of supply and availability is room occupancy rates, which report the proportion of occupied rooms relative to available rooms [20]. To differentiate themselves from competitors and to resist price pressure, successful hotels [21], travel agencies [22] and tour

operators [23] are increasingly investing in marketing. Such investments are made by these firms to build a strong brand image, to increase the visibility of their offerings, to stimulate customer loyalty and, in general, to enhance their performance [24-26].

Trip generation for tourism has its own challenges for peculiar, one model that was proposed for the improvement is the gravity model developed (improved gravity model), the additional value of the tariff / travel costs included in the factors affecting the gravity model this [27]. Two other approaches that can be used to analyze the trip generation for the analysis of traffic impact of which is the regression model and analysis categories [1]. Regression model become favorite models used to predict the trip generation in traffic impact analysis, regression model is continuously adapted by ITE user since the first edition to the current edition of all nine [28].

Each method of calculation of trip has advantages and disadvantages of each, a gravity model needs to be adjusted at each stage of the analysis and the type of obstacle, a regression model is deemed simple but necessary adjustments in assumptions and adjustments factors selected as the independent variable, while the analysis of the category of difficult in the calculation of each cell and is difficult to statistically justified [1]. Criticism for all methods have been delivered [4] is essentially the traveling was appropriate functions and needs, not because of a relationship with a construction area.

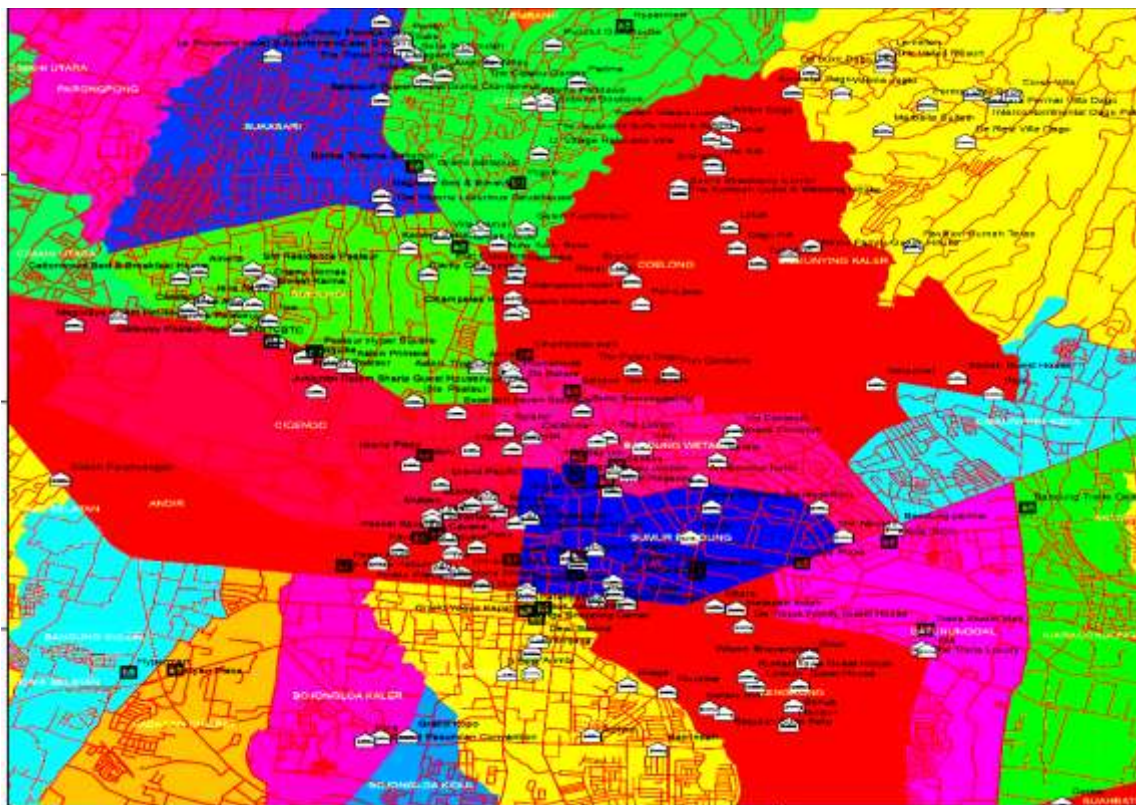


Figure 1 Hotel distribution in Bandung City

March-April

2. METHOD

Hotel data in Bandung is a population data that obtained from the Department of Tourism Bandung, Bandung Hotel and Restaurant Bandung Unity (organization of hotel employee in Bandung City) (as well as other sources of print and electronic media), checked with inventory surveys. Operational data includes occupancy of hotel room, rate, number of rooms, number of parking spaces, supporting hotel services obtained from surveys and interviews to managers and visitors of the hotel. Trip generation analysis using regression analysis with independent variables were considered as the results of surveys carried out.

Hotel distribution in Bandung City can be seen in the following figure: For an interview, referring to the number of samples [29-31]. Gay and Diehl [32] wrote that, for a descriptive study, the sample is 10% of the population, correlational research, at least 30 population elements, causal comparative study, 30 elements per group, and for research experiments per group 15 elements.

3. HOTEL TRIP GENERATION RESULTS

399 hotels in Bandung City, which consists of a five star hotel, four star, three, two and unclassified, note that the room occupancy is closely linked with the floor area and number of rooms. Hotel room occupancy can be interpreted as the level of trip generation. The relationship between filling the room and the floor area and number of rooms can be seen in the following figure:

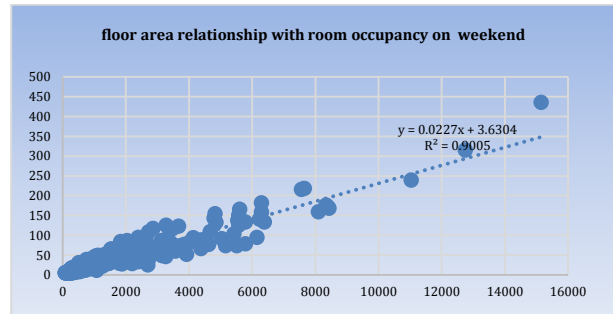
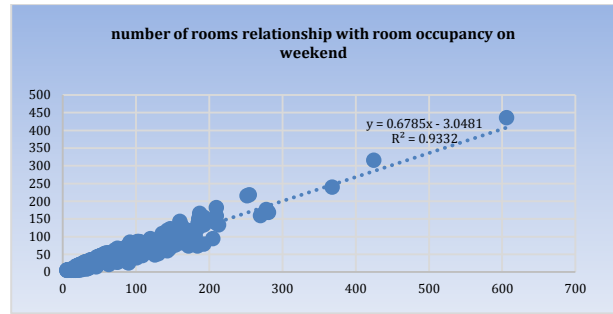


Figure 3 Hotel Trip Generation on Weekend

The picture above shows that on weekend, trip generation is closely related to the number of rooms and floor area each with R² of 0.93 and 0.90.

R² value is greater than the weekend indicated that holiday trip generation is more influenced by area, or in other words the need for the holiday so high that factors other than the floor area can be ignored. Rates become unimportant for a tourism trip, especially on holidays as illustrated below:

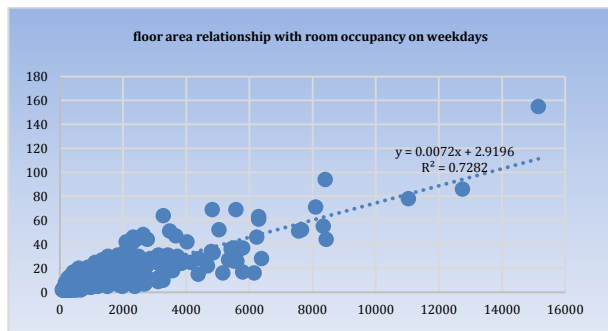
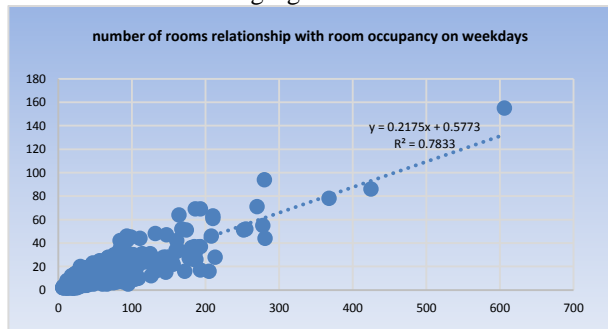


Figure 2 Hotel Trip Generation on Weekday

The picture above shows that on weekdays, trip generation is closely related to the number of rooms and floor area each with R² of 0.78 and 0.72.

Trip generation on holiday can be seen in the following figure:

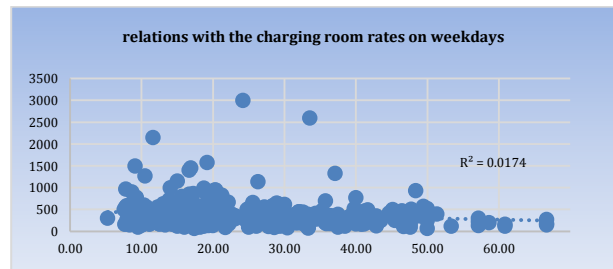


Figure 4 relations with the charging room rates on weekdays

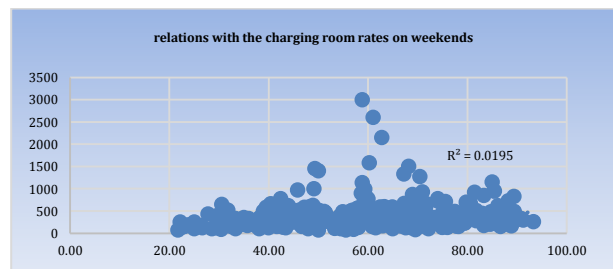


Figure 5 relations with the charging room rates on weekends

Figure shows that the R^2 value is very low indicating no relationship between hotel room occupancy with the rates charged for costumers. Hotel guests in Bandung generally bring enough money to stay so the rates are not so influential in filling hotel rooms. Another factor is the increased competition for hotel rooms in Bandung, so hotel guests must come as quickly as possible, otherwise they cannot get place to stay.

If it is classified according to 5 star hotels, 4, 3 to no star can be seen in the following table:

Table 1. Number of Hotel Room and Room Occupancy base on star

Hotel	Regression		R^2	
	weekday	weekend	weekday	weekend
5 star	$y = 0.2971x - 19.931$	$y = 0.7045x - 7.7554$	0,62	0,72
4 star	$y = 0.2317x - 6.8324$	$y = 0.7313x - 16.837$	0,76	0,88
3 star	$y = 0.69x - 4.5774$	$y = 0.2567x - 1.1966$	0,92	0,77
<2 star	$y = 0.7768x - 4.5695$	$y = 0.2754x - 0.4605$	0,93	0,75

The table 1 shows that on weekdays, the relationship number of hotel rooms and room charging strongly correlated to a 2 star hotels and no star. While on holiday, the four-star hotels that have a strong correlation. In other words, hotel guests prefer a 2 star hotel down on weekdays while on holidays, 4 star hotel is a favorite.

4. INTERVIEW RESULTS

Tourist visits can take place for various reasons: holidays, business trips, visits to friends and relatives, pilgrimages and so on. The vast majority of empirical studies of tourism demand examine either total tourist trips (i.e. for all purposes), or just holiday trips [9]. The interview about purpose of travel in Bandung City can be seen in the following figure:

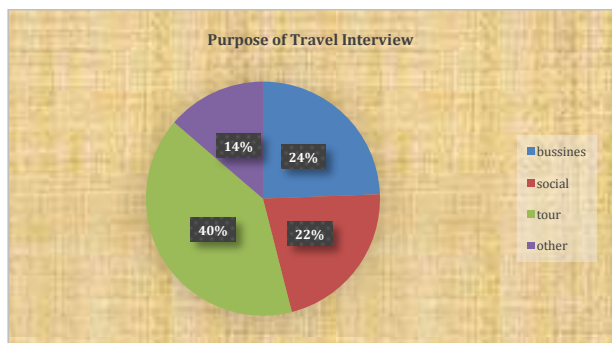


Figure 6 Purpose of Travel Interview

The images above show that the purpose of the trip is 40% tour, 22% social (visiting friend/family), 24% bussiness and 14% other (not answer).

Private car is the favorite mode for hotel users in Bandung as following figure:

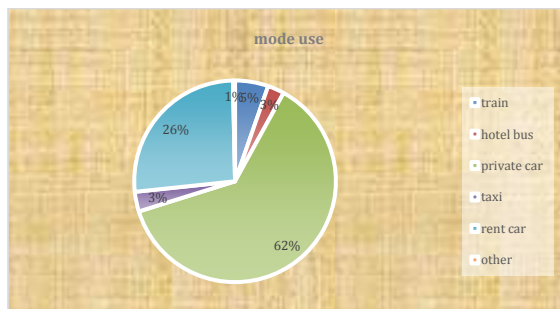


Figure 7 Mode Use

The image above shows that the use of private vehicles dominate modes of hotel guests but also many who use buses provided by the hotel. Views of traffic load, use of the hotel bus can reduce congestion so that the use of these vehicles need to be supported in the future.

In a written interview question if public transport will be provided specifically for tourism, the respondents answered as shown below:



Figure 8 Provision of public transport special for tourism

88% of respondents responded positively and agreed that if the hotel can provide a bus to travel, from the interviews is also known that the arrival of the hotel guests are not alone, there are some who form groups so that it will greatly facilitate the provision of bus tourist trip.

Length of stay (duration) of hotel guests can be seen in the following figure:

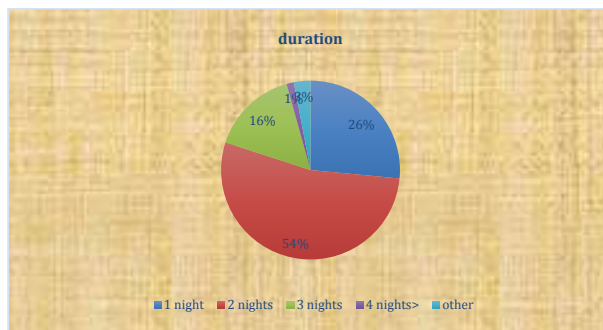


Figure 9 Hotel Duration

The image above shows that the majority of the two-night stay Saturday and Sunday nights. Hotel guests in Bandung

generally happy to walk on Saturday and then continued on Sunday. This length of stay show that there is an opportunity for the hotel provider to seek other services such as city tour. Hotel Chosing Consideration can be seen in following figure:

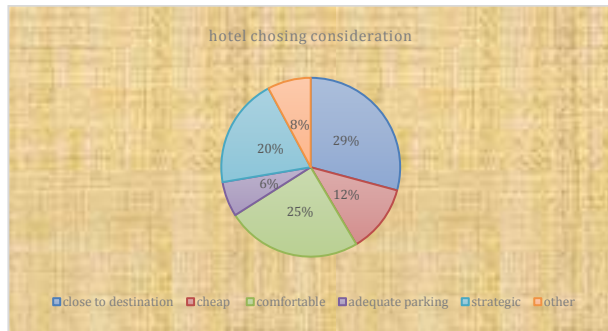


Figure 10. Hotel chosing consideration

Figure shows that only 12% are concerned about rates, most chose the hotel on the grounds close to the goal and strategic. Trip origin can be seen at following figure:

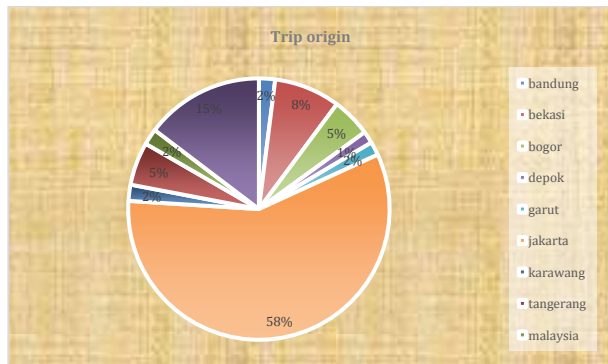


Figure 11 Trip Origin

The image above shows the origin of the trip is the city of Jakarta. as it is known Jakarta is the capital city of Indonesia. Bandung-Jakarta transport links now more easy by the presence of the toll road that accelerate travel using private vehicles.

5. DISCUSSION

Trip generation for a hotel in a tourist town not much influenced by factors other than the area or number of rooms available. Rates did not become important for tourism travel. Hence to calculate trip generation for hotel in the resort town is very relevant with Shoup statement [2]. Cornell and Page [11] findings about mode use also relevant: in domestic tourism, the car is the most important mode of transport for tourists travelling to, and within, a destination. The result of visitor research in Bandung - a tourist town- is known that 62% of travel using private cars. The car remains the greatest threat to the sustainable use of the resource by causing: congestion, pollution, visual and amenity pollution from unsightly car parking, loss of sensitive and rural land to provide car parking, damage to the existing environment through illegal parking on grass verges and in lay-bys which

have minimal provision to accommodate peak usage; an unsustainable impact on communities unable to accommodate the sudden influx of car users in small- scale environments, which cannot easily be managed, controlled or restricted [11]. There is an opportunity to rectify this condition, especially in Bandung that the train services is planned to be developed further plans to fast train with route Bandung-Jakarta.

6. CONCLUSION

According to Shoup [2], trip generation estimates were developed based on the idea that floor area is only one among many factors that influence vehicle trips at a site, and we should not expect floor area or any other single variable to accurately predict the number of vehicle trips at any site or land use.

The results of this study strengthens the argument that we can calculate the trip generation of a construction of hotels in the resort town based on the area. there are other factors that can influence such as the number of workers and the availability of parking spaces, but the area is enough to predict the trip generation of a hotel development.

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