

Policy of Decrease Customer's No-show at Restaurants

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Abstract

No-show reduction at restaurants can not only mitigate losses incurred when customers fail to honor a booking but also affect consumers' reservation behaviors. This study analyzed the ability of restaurant booking policies to reduce no-shows as well as the negative impacts. We herewith to summarize the results of the interview and suggest four reduce No-Show policies for restaurants, they are Re-offering seats, Overbooking, Partial reservations, and No-show penalties. These four methods are also the most common reduce No-Show policies for restaurants. A survey was conducted to understand the booking policies of the Taiwanese restaurant industry. The findings indicated that each sector of the restaurant industry possesses unique characteristics. This study shows that restaurant differentiation is important in setting booking policies. Reservation no-shows cause problems to wasted capacity and result in restaurants' losses. Our goal is to solve the wasted capacity and mitigation no-show loss, and to offer recommendations on what restaurants should do. Study was found that the restaurant operators generally believed that it was effective to have no-show penalty. Only each restaurant still has its own operating factors that affect its execution ability; the study also found that restaurants of different sizes may have variant reservation policies. So, The Restaurants can decrease No-show by 1.Re-offering seats, 2.No-show penalties, or 3.Overbooking and Partial reservations are interactions impact degree of customer's no-show.

Index Terms: No-show; reoffering seats; overbooking; partial reservations; no-show penalties.

1. Introduction

The restaurant reservation system certainly brings great benefits to restaurants, but Thompson and Kwornik (2008) analyzed the convergence study results of the incentive study and the catering industry has almost no agreement on how to handle appointments.

In the airline industry, in the face of competitive pressures, the search for ways to control costs and increase revenue has become more intense (Garrow, L., Koppelman, F., 2004). Airlines often miss bookings, appointments, or delays due to delays by customers who have reserved seats, and airlines will not consider this a generous gift. When this person is cool, they will transfer their seats to others so they will no doubt be able to sell them again.

In Garrow and Koppelman(2004) analysis of the status of the airline passengers on the departure date are: the selection of four types of concept models: "appear", "no-show", "early wait" and "late"; passengers reappear before the departure date Arrangements will be screened in the cancellation data and excluded from the analysis. The four categories are used to describe passengers' initial reservations and their entry and exit travel decisions. When the company is faced with a situation in which the customer is no-show, the service or product that has been confirmed and arranged will inevitably suffer loss; therefore, the restaurant can also solve the problem of the reservation customer's no-show by re-seat. The seat is resold to the next customer.

At present, the reservation system for the airline industry and hotels is also mode to overbooking. Overbooking means that the number of sale seats in the restaurant is more than the actual number of seats in the restaurant. The reason to assume is that some customers will miss the pre-booked meal time, or a sufficient number of customers are willing to accept compensation from the restaurant and promise to change the meal time.

Toh (1986) stated that overbooking is a common phenomenon and recognized practice in the hotel and airline industry. Hotels and airlines make protective overbookings, so bookings exceed the capacity to overcome the problem of no-shows and delayed cancellations. Since some of the passengers booked did not actually board, when the seats were needed, the airline overbooked to reduce the estimated number of aircraft empty seats (Garrow, L., Koppelman, F., 2004). Therefore, predicting passengers' no-show and wait behavior is an important component of airline profitability and income management (Garrow, L., Koppelman, F., 2004). Because an airline has a fixed number of seats, and when an airline overbooks for maximum profitability and seat utilization, It has many possible ways to deal with passengers who are rejected for oversold. The airline can offer to upgrade passengers on the same flight, or provide seats for another flight, and provide compensation for cash, meals, or hotel accommodation (Weatherford, Bodily, 1992).

In the hotel industry, a similar approach is taken. When the hotel is overbooked, it must be prepared so that after all rooms are allocated, the hotel service counter must face customers who have checked-in rejected and walk-in. However, apart from apologizing to customers, the hotel has two options to deal with this situation. The hotel is also like the airline's approach, they can provide customers with upgrade

services, or provide transportation to another similar standard hotel, and pay the difference in room fee. Toh (1985) regards overbooking as an inventory problem with fixed supply and flexible demand changes, and proposes an inferential statistics inventory deplete model that wisely balances the opportunity cost of empty rooms with the adverse consequences of oversold, enabling hotel managers to have establish an optimized booking system.

Past research suggests that overbooking could improve operational efficiency by making full use of the hotel rooms and airline seats that are no-shows, otherwise these seats or rooms may be wasted. These advantages of overbooking outweigh the inconvenience caused to customers and passengers occasionally, and they may be rejected when registering for check-in.

The overbooking of the hotel industry and airline industry has been well studied (Gosavii, Bandla, & Das, 2002; Hwang & Wen, 2009; Noone & Lee, 2011; Toh & DeKay, 2002). Due to differences in the convention of business and industry practices, the overbooking of restaurants is very different from the case of overbooking by hotels and airlines. Although there are many studies on overbooking for hotels and airlines, there are few studies on overbooking in the food and beverage industry (Tony S. M., Yiu-Tung, 2017). According to Lambert et al., (1989) overbooking is the most widely used management strategy to minimize financial losses due to cancellation and no-show.

In order to maximize the value of their seats, some restaurants will also adopt partial reservations. Thompson and Kwornik (2008) show that restaurant reservations integrate the flexibility of system transactions to lock in reservations in order to provide customer perceived benefits, especially simpler reservations management methods, seat assignments, seat combination arrangements, and the entire visualization system. Therefore, the number of reservations is also limited. However, locking an reservations also requires an adaptive process management strategy to handle no-show, waits, and customer traffic.

The restaurant uses an reservation policy stabilize the demand, optimize the table rate, minimize the queue chances, and increase customer satisfaction. The restaurant management a tool of "table combination" that can be used to optimize the capacity of restaurants in different sizes of dining tables.(Kimes and Thompson, 2004,2005; Thompson, 2002). Faster turnaround rates increase service efficiency and allow restaurants to serve more customers during peak meals. (Kimes, Wirtz, and Noone, 2002). However, restaurants differ from other limited-capacity services such as nail salons, KTV, hair salons, skin care centers, golf courses, and dental clinics. When encountering temporary changes in demand, the products are more likely to be corrupt and difficult to preserve. Therefore, if the customer can reduce the uncertainty of the transaction through the appointment service, but this good policy may reduce the restaurant's income when the customer no-show, late, and walk-in is rejected. Therefore, companies providing services will attempt to manage this uncertainty through an reservation system. The contractual content of these reservation policies describes clearly the rights and obligations of customers and service providers (Wilson, 2007). Reservation can take various forms, ranging from unconditional verbal agreements (such as specific groups or individuals, booking seats on the phone to a restaurant on a specific date) to conditional written contracts, and there are stipulated terms and penalties for customer cancellations or no-shows.

Hotels and airlines often have some form of credit card pre-brushed guarantee payment directly by the customer and passengers or travel agents. If you no-show after booking your room, you will be charged at least one night. If the passenger no-show after booking the flight, the airline may impose penalties on the passenger according to the conditions of his ticket type. If it is a non-refundable ticket, the passenger may eventually lose the entire amount of the ticket. Some high-profile and popular restaurants may require credit cards for pre-payment guarantees because of the small number of seats, but this practice is not common in the catering industry. People who have already booked in the restaurant and cancelled reservations or no-shows are seldom punished. In fact, most people can no-show without fulfilling reservation, and this is considered to be one of the reasons why restaurants are more no-shows and canceled in the catering industry than hotel or airlines (Tony SM, Yiu-Tung, 2017). In the past research report on the restaurant, it was noted that the percentage of people who have booked a seat but did not arrive is 3% to 15% (Bertsimas, Shioda, 2003), and even a ratio of about 20% is common (Webb Pressler, 2003) , especially on New Year's Eve and other special occasions, the ratio of no-show can reach 40% (Martin, 2001).

2. Literature Review

The restaurant reservation system certainly brings great benefits to restaurants, but Thompson and Kwornik [21] analyzed the convergence study results of the incentive study and the catering industry has almost no agreement on how to handle appointments.

In the airline industry, in the face of competitive pressures, the search for ways to control costs and increase revenue has become more intense (Garrow, L., Koppelman, F., [5]). Airlines often miss bookings, appointments, or delays due to delays by customers who have reserved seats, and airlines will not consider this a generous gift. When this person is cool, they will transfer their seats to others so they will no doubt be able to sell them again.

In Garrow and Koppelman([5])analysis of the status of the airline passengers on the departure date are: the selection of four types of concept models: "appear", "no-show", "early wait" and "late"; passengers reappear before the departure date Arrangements will be screened in the cancellation data and excluded from the analysis. The four categories are used to describe passengers' initial reservations and their entry and exit travel decisions. When the company is faced with a situation in which the customer is no-show, the service or product that has been confirmed and arranged will inevitably suffer loss; therefore, the restaurant can also solve the problem of the reservation customer's no-show by re-seat. The seat is re-sold to the next customer.

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Past research suggests that overbooking could improve operational efficiency by making full use of the hotel rooms and airline seats that are no-shows, otherwise these seats or rooms may be wasted. These advantages of overbooking outweigh the inconvenience caused to customers and passengers occasionally, and they may be rejected when registering for check-in. The overbooking of the hotel industry and airline industry has been well studied (Gosavii, Bandla, & Das, [7]; Hwang & Wen, [9]; Noone & Lee, [16]; Toh & DeKay, [20]). Due to differences in the convention of business and industry practices, the overbooking of restaurants is very different from the case of overbooking by hotels and airlines. Although there are many studies on overbooking for hotels and airlines, there are few studies on overbooking in the food and beverage industry (Tony S. M., Yiu-Tung, [22]). According to Lambert et al., [13] overbooking is the most widely used management strategy to minimize financial losses due to cancellation and no-show.

In order to maximize the value of their seats, some restaurants will also adopt partial reservations. Thompson and Kwornik [21] show that restaurant reservations integrate the flexibility of system transactions to lock in reservations in order to provide customer perceived benefits, especially simpler reservations management methods, seat assignments, seat combination arrangements, and the entire visualization system. Therefore, the number of reservations is also limited. However, locking an reservations also requires an adaptive process management strategy to handle no-show, waits, and customer traffic.

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3. Methodology

3.1. Research Method

The main purpose of this study is to explore the mode of reservation system for restaurant reducing no-show in Taiwanese restaurants. It is hoped that case studies will provide reference for other Taiwanese restaurant operators to reduce losses and increase revenue.

This article is based on Alexandrov, Alexei, Lariviere, Martin A. (2012) and other scholars' former study of the restaurant reservation system, it said that when the demand is high, the restaurant must weigh the loss caused by this income and no-show, then the restaurant can have a motive to limit the influence of no-show, four strategies for reducing no-shows have been proposed in the form of deductive models: Re-offering seats, Overbooking, Partial Reservations, and No-show penalties. For the purposes of this study, the study was conducted on a case-by-case basis and in-depth interviews were used to assist in the collection of complete data to process the study.

3.2. Data Collection

The object of study was to select 5 restaurants with publicity as the main research object. The Table 1 of which was intended to elicit demographic information on the five respondents.

Table 1 : Basic information of respondents

Respondents code	Sex	Education	Position	Tenure	*Restaurant seats
A	male	University	manager	5	Over 500
B	male	master	Boss	30	400~500
C	male	senior	manager	15	200~300
D	Female	University	Boss	15	100~200

E	male	University	Boss	5	50~100
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*restaurant's seat quantity defined of restaurant's scale.

All of the interviews were recorded and categorized. The results were analyzed and presented.

The measurement tool of this study is a questionnaire. The questions are revised according to the research purpose, the nature of the restaurant and the respondents, and the definition of the operation type. Question is based on the characteristics of the restaurant and the respondent. After the completion of the preliminary draft of the questionnaire, discussions with experts and scholars were carried out to establish whether the questions and statements of the questionnaire were appropriate. After many discussions and revisions, the questionnaire for this study was completed. Four variables, such as "Re-offering seats", "Overbooking", "Partial reservations", "No-show penalties". The measurement method uses Likert's five-point scale, which is Strongly Agree, Agree, Neither Agree or Disagree, Disagree, and Strongly Disagree, which represent number 5, 4, 3, 2, and 1 respectively. The measures for the "Status of Customer's No-Shows" are very slight, slight, normal, serious, very serious, represent number 5, 4, 3, 2 and 1 respectively.

This study investigates all types of restaurants in Taiwan. The respondents in this section are the executives of the restaurant. They have sufficient experience in restaurant operations and familiarity with the company's operating system. The actual situation of the adoption reservation system is responded to this study as the object of distribution.

A total of 68 questionnaires were collected in this study, and the effective questionnaire was 66.

4. Results and Discussion

4.1. Re-offering seats

For restaurants, the day when customers agreed to dine time was booked, if the customer did not show up, is called "No-Show"; some restaurants will provide the seat of no-show to visitors without prior reservation and directly to the restaurant consumption. Re-offering seats in the restaurant refers to reselling the seats of no-show customers to other customers in order to reduce losses.

Responsible person B stated that "usually the reserved seats in our restaurant are only reserved for 10 to 15 minutes, overtime will be cancelled and rescheduled, then sold to walk-in (without prior reservation)." Therefore, there will be restrictions on the restaurants' retention time. For example, person in charge D also said that "our restaurant will limit the reservation time of reserved seats". There are also restaurants that have problems with the number of customers visiting the restaurant each day. For example, person in charge E says that "since we have a small number of walk-in from restaurants, we will limit the reservation retention time". However, some of the temporary cancellation of the seat factor was caused by the customer's problem. Therefore, store manager C stated that "the seat that was temporarily cancelled on that day will be re-offering seats for sale to walk-in (without prior reservation)". However, Some restaurants are not worried about defaulting no-show, as shop manager A said, "Our restaurant has a large number of walk-in (without prior reservation) every day, and it is enough to fill the gaps of no-show."

Therefore, for some restaurants, the solution to the no-show problem is to re-offering seats to make the seat for sale again. Therefore, the person in charge B said that if the customer fails to meet the deadline set by their restaurant, their restaurant will re-submit the reservation.

But Re-offering seats effect to restaurant's scale that Oneway Anova Analysis result no significant impact.

Table2: Re-offering seats effect to restaurant's scale.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	79.637	6	13.273	1.424	.221
Within Groups	550.120	59	9.324		
Total	629.758	65			

Oneway Anova Analysis result no significant impact.

4.2. Overbooking

Some restaurants operate in a manner similar to that of the aviation industry. They sell more seats than the restaurant can accommodate in order to avoid a reduction in revenue due to the temporary cancellation of customers.

Shop manager A and person in charge B said "Because we have enough seats, we don't worry about that customers' seats will be replaced by too many walk-ins, so our restaurant has an overbooking system". At the same time, store manager A stated that "Our restaurant will use overbooking because it expects a certain percentage of no-shows." Person in charge E said, "Our restaurant also hopes to fill up customers through overbooking, but the number of seats in our restaurant is not big enough to affect the interests of customers who have already reserved." Shop Manager C stated that "the main purpose of the restaurant's selection of overbooking is to maximize revenue, but it will still consider whether the number of seats is sufficient."

The person in charge D explained that "overbooking allows customers to fill up automatically to reduce the risk of customer's no-show, but it also considers the trouble caused by customers who have already made reservation."

Table 3: Overbooking effect to restaurant's scale.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	155.655	6	25.943	1.465	.206
Within Groups	1044.603	59	17.705		

Total	1200.258	65			
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Oneway Anova Analysis result no significant impact.

4.3. Partial reservations

Some restaurants have designated VIP rooms or VIP areas. These locations are usually reserved for reservations. Some rules may even be reserved for VIP customers or member customers. That is to say, these VIP areas or rooms are not always available for all purpose. Shop manager C, person in charge D and E all said "we have a limited number of reservations in our restaurant so that we can reserve some seats for walk-in (without prior reservation)." However, the limited number of reservations is not always prepared for walk-in, and the person in charge B said, "Our restaurant limits the number of reservations so that some seats can be reserved for members." However, some restaurants operate because of the establishment of private boxes. Therefore, store manager A stated that "our restaurant has different compartments in order to limit the number of reservations so that to reserve some seats for VIPs". However, limiting the number of appointments does not necessarily solve the problem of cool appointments. The person in charge D said that "some companies have limited the number of reservation in order to solve the problem of no-show, but I think that the restaurant's partial reservations cannot completely reduce the ratio of empty seats generated by no-shows." However, limiting the appointment also has its advantages. That is, store manager C said "our restaurant partial reservation is to provide better service."

Table 4: Partial reservations effect to restaurant's scale.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	366.232	6	61.039	3.424	.006
Within Groups	1051.889	59	17.829		
Total	1418.121	65			

Oneway Anova Analysis result have significant impact.

The study found Partial reservations effect to restaurant's scale have significant impact. Therefore, continue to explore multiple comparisons of Partial reservations effect to restaurant's scale. We discover restaurant's scale below 50 and 400~500(include) of the seats, significantly different with other seats of restaurant scale.(Table4,Table5)

Table 5: Multiple Comparisons of Partial reservations effect to restaurant's scale.

(I) restaurant's scale (Restaurant seats)	(J) restaurant's scale	Mean Difference (I-J)	Std. Error	Sig.
below 50	50~100(include)	3.490 [*]	1.577	.031
	100~200(include)	3.803 [*]	1.577	.019
	200~300(include)	2.990	1.897	.120
	300~400(include)	5.615 [*]	2.704	.042
	400~500(include)	8.615 [*]	2.084	.000
	over 500	.365	2.414	.880
400~500(include)	below 50	-8.615 [*]	2.084	.000
	50~100(include)	-5.125 [*]	2.021	.014
	100~200(include)	-4.813 [*]	2.021	.021
	200~300(include)	-5.625 [*]	2.280	.017
	300~400(include)	-3.000	2.986	.319
	over 500	-8.250 [*]	2.726	.004
over 500	below 50	-.365	2.414	.880
	50~100(include)	3.125	2.360	.191
	100~200(include)	3.438	2.360	.151
	200~300(include)	2.625	2.586	.314
	300~400(include)	5.250	3.225	.109
	400~500(include)	8.250 [*]	2.726	.004

Dependent Variable: Partial reservations
LSD

4.4. No-show penalties

Some restaurants require customers to pay the deposit when they accept reservation. If the customers didn't show up, the restaurant would perform a no-show penalty. In addition, the customer cancels the meal reservation and fails to comply with the restaurant's cancellation within the time limit specified in the restaurant. This is also a temporary cancellation of the same as a no-show. That is, if the booking is not changed or canceled within the prescribed time limit, it is deemed as a "No-Show."

Responsible person E stated that "Because the number of seats is limited, in order to avoid the loss caused by no-show, the reservation system adopted by our restaurant must receive an advance deposit." Shop manager A and person in charge B said that the reservation system adopted by our restaurant must be subject to subscription deposit. It may be a good idea to charge a booking deposit, but shop manager C said, "Our restaurant sometimes consider the status of customers who have not changed their booking time within the prescribed time limit before they can determine whether a fine is required." Responsible person D explained that "Our restaurant also had customers who did not cancel the reservation within the prescribed time limit, but at the end there was no fine." Therefore, there may still some progress to make for restaurants' execution upon fines. However, all five managers stated that "it's effective that restaurants to collect fines on no-shows; it is also possible for restaurants to charge some of the reservations from the reservation deposits. Fines may be taken from the booking deposit for a full amount of fines, but some restaurants may not be able to do so at present because generally

restaurant do not do so, otherwise we will lose customers. Therefore, according to the opinions of five managers, it is indeed effective to reduce the amount of fines for restaurants.

Table 6: No-show penalties effect to restaurant's scale.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	295.565	6	49.261	1.624	.157
Within Groups	1790.192	59	30.342		
Total	2085.758	65			

Oneway Anova Analysis result no significant impact.

4.5. Restaurant reservation policies effect to reduce no-shows

The relationship between restaurant reservation policies and degree of customers no-show.

Table 7: Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	58.466	53	1.103	4.320	.004
Intercept	75.149	1	75.149	294.260	.000
Re-offering seats	8.527	9	.947	3.710	.019
Overbooking	7.704	13	.593	2.321	.078
Partial reservations	8.507	13	.654	2.562	.057
No-show penalties	14.715	12	1.226	4.802	.005
Error	3.065	12	.255		
Total	971.000	66			
Corrected Total	61.530	65			

Dependent Variable: The degree of customer's no-show

Table 7 analysis results Re-offering seats and No-show penalties have a significant impact on reduce the degree of customer's no-show.

Table 8: Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	53.530	48	1.115	2.370	.027
Intercept	781.722	1	781.722	1661.159	.000
Overbooking × Partial reservations	53.530	48	1.115	2.370	.027
Error	8.000	17	.471		
Total	971.000	66			
Corrected Total	61.530	65			

Dependent Variable: 1. The degree of customer's no-show.

Table 8 Analysis Results Overbooking and Partial reservations are interactions have a significant impact on reduce the degree of customer's no-show.

5. Conclusion

In this study, the manager or owner of a high popularity restaurant conducted an opinion survey and verifications reduce no-show for the current status of the restaurant reservation system. Within the study, it was found that the restaurant operators generally believed that it was effective to conduct fine for the no-show. Only each restaurant still has its own operating factors that affect its execution ability; this could be an issue to be discussed afterward. However, the study also found that restaurants of different sizes are with variant appointment system. Therefore, restaurant's scale below 50 and 400~500(include) of the seats, significantly different with other seats of restaurant scale. For larger restaurants, since there are efficient seats, it's more flexible to plan so that allows them to limit the number of reservations and some of the seats can be reserved for VIPs; yet for smaller restaurants, because there are fewer seats, it is necessary to limit the number of reservations in order to retain some of the seats for walk-in. So, The Restaurants can decrease No-show by 1.Re-offering seats, 2.No-show penalties, or 3.Overbooking and Partial reservations are interactions impact degree of customer's no-show.

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