Group Coursework Submission Form

Specialist Masters Programme

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Lecturer: Oben Ceryan	**Submission Date:** 12/04/2023

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Pricing and Revenue Management Strategies in the Food Services Industry

1. Introduction

Revenue management is a theoretical method to maximize corporate revenue and profit through resource integration and optimization. It originated from the American aviation industry in the 1970s and was gradually applied to industries with perishable products such as accommodations, restaurants and entertainment (Boyd & Bilegan, 2003). Time management, capacity management, differential pricing, and menu management are the four primary areas of focus in the current literature on revenue management in the food service business. These four aspects will be introduced and potential development opportunities and innovative initiatives will be analyzed.

2. Existing Pricing and Revenue Management Strategies

2.1 Time Control

Both time and food are on sale at restaurants (Kimes et al., 1999). Catering services are more amenable to the revenue management concept than restaurants are, provided that the consumption unit of the restaurant is understood to be the time spent by the client rather than the meal itself. When demand is high and there is a limited supply of seats, the restaurant risks losing customers to other establishments. There are three phases to a customer's dining experience: waiting, eating, and paying (Kimes et al., 2002). The reduction in the variance of customers' mealtimes allows restaurants to manage reservations and place arrangements more efficiently. As a result, this facet of revenue management seeks to examine how customers' lunch times affect their habits. The influencing factors of meal time are divided into internal and external

factors. Internal factors include: table type and location shadow and restaurant service efficiency (Kimes & Robson, 2004). External factors include the number of diners, personal preferences of customers, and consumption culture (Bell & Pliner, 2003).

2.2 Capacity Control

The ability to produce food is a constraint for restaurants, therefore they must make the most of their current capacity to maximise profits. Maximizing profits with the available workforce and infrastructure is the goal of capacity management (Desiraju & Shugan, 1999). Restaurant capacity has been governed by the layout of the tables and chairs ever since they were installed. Some research suggests a 30% boost in restaurant income just by seating diners at already occupied tables (McAdams, 2016). Restaurant revenue management's capacity control is shown in two areas: reservations and seating. Several restaurants, particularly those in the middle- to upper-price range, have begun using reservation systems. In order to better establish a scientific reservation system, restaurants should record the information of customers' cancellations, no-shows and late arrivals to provide a basis for measures such as overbooking, and at the same time learn to control reservations. For seat control, four table arrangements are currently used, namely front to back, outside to inside, inside to outside and random mode. On the whole, the front-to-back and outside-in modes are conducive to less waiting time for customers, improving customer satisfaction and increasing restaurant revenue, as shown in figure 1 below (Hwang, 2008).

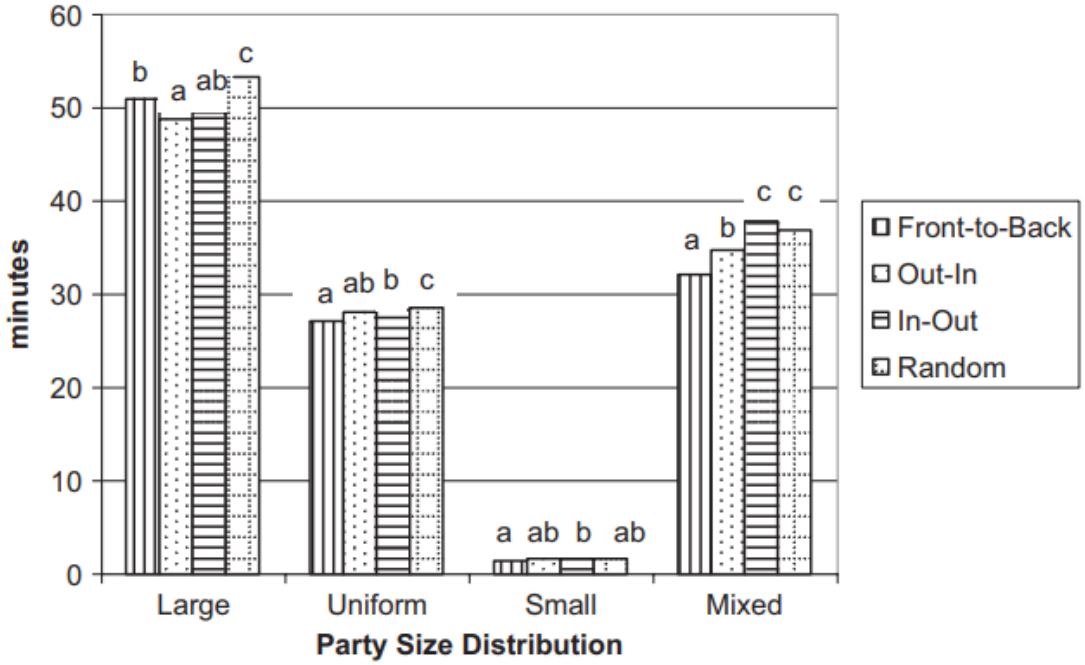

Figure 1: Average waiting time per customer under different seat control methods (Source: Hwang, 2008)

2.3 Differential Pricing

When it comes to increasing sales, pricing is a major factor to consider. Consumers who are prepared to pay a high price must be discouraged from purchasing a low-price item as a result of the impact of revenue management pricing, achieved via price sensitivity segmentation. Differential pricing refers to the practise of charging different rates to different clients at various times for the same or nearly identical goods and services.

Differential pricing is often met with consumer complaints of being treated unfairly. Research shows that most consumers are OK with variable pricing, and that it makes restaurant administration easier (en, 2013). Nonetheless, some research has indicated that price discrimination in restaurants negatively affects customers' perceptions of fairness and value (Heo et al., 2013). Although there are several examples of successful implementation of differential pricing strategies in the hotel and airline industries, this is not the

case in restaurants. Consumers' sense of fairness, the relative attractiveness of alternative pricing structures, the relative attractiveness of different expressions, and the relative attractiveness of different eating objectives have all been the subject of empirical study on differential pricing. Segmenting clients based on their willingness to pay, their consumption patterns, their consumption demands, etc., gives birth to price fencing. Reservations, prepayments, limitations, return penalties, use time limits, and minimum spending amounts are all examples of possible fences. By setting up fences such as advance booking, no transfer and no refund, these two types of customers can be distinguished and differentiated pricing can be achieved.

2.4 Menu Management

Restaurants may update their menu design in response to market trends, and they have the option of using a set menu, a rotating menu, or an instant menu to maximise profits. Each menu strategy has the potential to provide some of the exceptional advantages, but each also has drawbacks. Standardized manufacturing benefits from the set menu, but consumers become weary of the few options after a while. Circular menus reduce labor costs to a certain extent, but are not conducive to raw material management (LeBruto et al., 1997). The instant menu has strong flexibility and is difficult to achieve standardized management. Thus, restaurants can combine menu policies among them.

3. Opportunities and Innovative Strategies

3.1 AI-driven opportunity

Despite a number of helpful time/capacity/differential pricing/menu management efforts, revenue in the food service business remains stagnant. One potential downside is that insufficient attention has been paid to AI technology. The development of revenue management is now being driven by

automation. Thanks to recent developments in AI and ML, the most cutting-edge systems can now change prices and fees on their own. This frees up time that would otherwise be spent analysing figures and entering data into spreadsheets, allowing revenue managers to dedicate their efforts elsewhere. Even the most seasoned revenue manager using the most cutting-edge tools available only a few years ago would have struggled to keep up with the pace and complexity of today's pricing choices and the resulting financial implications. The rate of technological advancement has been dizzying.

Smarter pricing is mostly driven by the capacity to incorporate new data sources. In addition to using the food service management system's historical data archives, advanced revenue management solutions often make use of a plethora of market information and other data, such as pricing and booking trends from competitors. This allows for more precise demand forecasting, which in turn boosts restaurant sales and profits in previously unimaginable ways. In this context, it's hardly surprising that cutting-edge, AI-driven revenue management has swept the business world by storm. Over a hundred million choices are automatically generated across tens of thousands of properties per day by some of the best AI-powered systems, frequently replacing traditional solutions that take a manual, rules-based approach to creating price decisions. Curiously, AI-powered solutions may lead to price choices that are aggressive, illogical, or simply inappropriate in the eyes of revenue managers. When contrasted to the data processing and analytical powers of humans, here is where the true power of big data and machine learning resides.

3.2 Innovative Strategies

Technology interoperability and data integration. Successful revenue management relies heavily on the use of technological solutions. There has to be seamless integration and data sharing between property management systems (PMS), central reservation systems (CRS) or channel managers, and

revenue management solutions (RMS), ideally in real time. Information about available inventory must be shared across all sales channels, including online booking tools, telephone reservations centres, and worldwide distribution systems. Input from the RMS should inform the CRS's optimum price choices and channel suggestions. In the world of revenue management, there is no such thing as a stand-alone programme. Integrating marketing, sales, and distribution systems is essential, as is seamless integration with numerous data sources.

Tailoring solutions to specific users and properties. Every revenue management system will inevitably need some amount of customization to meet the varying demands of its customers. It is important for revenue managers to be able to set up alerts once certain conditions are met, such as when demand increases or when certain parameters deviate from their ideal range. Users should be able to choose their own priorities for what information is most important to them and how it is shown on dashboards, as well as utilise built-in report creation capabilities to show off their choices. To mine the correct data and create meaningful insights based on specified characteristics, restaurants need customizable settings.

Group sales optimization. One way in which group business may significantly affect a restaurant's bottom line is via the use of supplementary services. Because of the potential for groups to restrict the number of available rooms, restaurants may be able to charge higher prices to individual diners and smaller groups. Nevertheless, issues might occur if a restaurant hires too many tables at negotiated rates, pushing off high-value guests. These issues may be resolved and the greatest possible mix for a restaurant's company can be attained via the use of an AI-powered accurate group prediction solution and well-designed segmentation.