

The Main Strategies of Restaurant Revenue Management and its Applicability in the F&B Department

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Abstract: Over the past years, Revenue Management has been used in various sectors, starting in the airlines, passing through the hotel and restaurant sectors, with a focus on the creation and maximization of revenue. In this sense, Restaurant Revenue Management becomes a useful tool for incomes, making establishments more competitive and contributing to business growth and sustainability in catering and restaurants context. The main objective of this study is to research the development and application of Restaurant Revenue Management, through the study of its systems and strategies, to understand how restaurant and catering establishments can optimize revenue through the creation and implementation of RRM systems. This research begins with a literature review where we aim to understand the principles and characteristics of Restaurant Revenue Management as a whole, to know the RRM strategies and how to apply them in the hospitality and catering sector. The methodology chosen was quantitative, where questionnaires were prepared and distributed to hotels and restaurants in Portugal. The results demonstrate that major part of the respondents is not familiar with the concept of Restaurant Revenue Management. Most respondents believe that the application of the RRM concept is important for the company's results and for those who are familiar with the concept, they consider that it allows the ideal customer to be defined based on their characteristics and enables decisions to be taken based on knowledge, creating a structure of fixed and variable costs. *Purpose:* Thus, the general and specific research objectives inherent to the study are: To assess how Restaurant Revenue Management is applied in Portugal in the restaurant and hotel contexts. To recognize what are its characteristics and practices. To understand how Restaurant Revenue Management influences revenues. To realize the advantages and disadvantages identified by the application of restaurant revenue management. *Methodology:* This research focuses on a quantitative methodology, using the questionnaire as a data collection tool. A deductive research approach was used in the scientific research process. The technical procedure used in the investigation phase was bibliographic research, having been collected information in several scientific articles and books on the subject. On a first moment, the collection of relevant documents for the research was made. The script was validated by six academic professionals and five professionals from the sector. After validation, an online questionnaire was conducted using the Google Forms platform. To achieve the maximum possible number of answers, the distribution channel used, to collect the results, was the e-mail. An initial telephone contact was made to confirm availability to answer the questionnaire. After this contact, the questionnaire was sent via e-mail. The questionnaires were conducted in Portuguese, as the study was only intended for entities located in Portugal. During the investigation, 880 questionnaires were sent out and 131 responses were received all completed, in a period between June and August. The instrument used to analyze and process the data collected was Excel. *Results:* The concept of Restaurant Revenue Management generally is not known among F&B departments, as demonstrated in the answers collected during the distribution of the questionnaire, in which 58.8% do not know the concept and only 41.2% of the respondents are familiar with the subject. Those who know and apply the concept of RRM consider the application of the concept and its respective impact important and crucial for the business. In the answers to the questionnaire about 57.4% consider its application important, while 24.1% considers it very important and 14.8% extremely important. Only 3.7% states that the RRM is not very important. Of the 131 respondents, only 41.2% are familiar with the concept of Restaurant Revenue Management, making a total of 54 responses. *Originality:* This is original research with the authors perspective constructed based in arguments from other research work to back up the investigation.

Keywords: Food and beverage department, Hospitality management, Profitability, Restaurant revenue Management, strategies

1. Introduction

Nowadays, in the hotel and restaurant sectors, there is a constant concern when it comes to maximizing revenue. There is an increasing need to create strategies to optimize profit as demand is a constant concern, especially during low seasons. To try to maximize revenue, controlling the rigid capacity and a fickle demand, arose the RRM that had its origin in the airline industry, expanding into other areas such as hotels, restaurants, golf and casinos (Anderson & Xie, 2010).

Kimes & Wirtz, (2013, p.2) state that "Revenue Management is the application of information systems and strategies to allocate the right customer, at the right time, in the right place, with the right capacity." It is thus based on 4 pillars and its main function is to set the price according to demand, considering numerous factors. From the 1990s, the application of revenue management has extended to more areas of activity such as hospitality and catering (Bobb & Veral, 2008).

Since its inception Revenue Management has undergone through some developments and one of them was in its main objective, moving from a focus on the average occupancy rate to the maximization of revenue, focusing on profit (Anderson & Xie, 2010).

The main objective of this research is to study an area still little explored in Portugal which is Restaurant Revenue Management in tourist resorts, more specifically in the F&B area. Its purpose is to analyze Revenue Management practices and apply them to the F&B department of tourist resorts and restaurants. This research aims to provide an original approach to Revenue Management in which it is intended to help face new challenges resulting from an increase in supply and the emergence of new management concepts.

2. Literature Review

The hospitality sector is considered in many countries the most important economic sector, providing social advance, employment and according to Alcobia (2019) the total revenue from this sector grows significantly. To Taludker, Sood & Grima (2023) food and beverage in hotels is a basic requisite for many people so food industry is growing, and the customers require quality in food service. At the same time, managers aspire to maximize the revenue, and this requires techniques and procedures provided by the revenue management. Revenue Management, also considered as Yield Management (although they are different concepts), covers a set of management techniques that consist in defining a pricing policy with the aim of maximizing profits in the provision of services and in the sale of goods. For Kimes (2004) a successful Revenue Management strategy will have to offer a variety of prices for different market segments. According to Kimes & Thompson, (2004) Revenue Management (RRM) is the application of information systems and pricing strategies to achieve the right capacity, for the right customer, in the right place. It translates into setting prices according to the level of expected demand, so that customers who are more price-sensitive can enjoy a favorably priced service outside peak demand hours, while those customers who are less price-sensitive can purchase a meal within peak demand. Despite this unfamiliarity, many authors state that the concept of RRM is applied in several activity sectors as transcribed: "RRM is a strategy used by companies with the aim of maximizing profit. This strategy applies to airlines, restaurants, golf courses, casinos, resorts, and entertainment events" (Bujisic, et al, 2014). Throughout the literature review Restaurant Revenue Management is referred to by Kimes, Barrash & Alexander (1999, p.18) as "... selling at the right place, at the right price and with the right duration."

For Patel (2020) hotels can examine the guests' preferences or habits and maximize revenue by implementing revenue management technics. For Hewitt (1998) "There are several characteristics that are vital to a best practice of RRM in catering namely: perishable inventory, inventory indicators, segmented markets, fixed capacity, predictable fluctuating demand, cost structure, fixed and variable cost, in advance booking, duration management, duration reset, customer arrival uncertainty, overbooking, duration uncertainty, sell time, reduce transition time and price management."

Restaurants present important characteristics for the application of Revenue Management techniques, such as fixed capacity, perishability, variable demand over time, a cost structure and market segmentation. There are suitable indicators to be able to best evaluate the effectiveness of the operations of each restaurant establishment. One of the most common indicators is REVPASH (revenue per available seat hour).

Kimes, Barrash & Alexander (1999, p.18) define Restaurant Revenue Management as "... selling at the right place, at the right price and with the right duration."

For Kimes (2004), citing B.A. Smith, et al (1992), RRM is the application of an information system and pricing strategy considering the right capacity, the right customer, in the right place and at the right time. The main objective will be to define a given pricing strategy according to demand level forecasts. These forecasts should include customers who are price sensitive to create a favourable off-peak price for that segment. Non-price sensitive customers shall also be considered, including those consumers at peak time.

RRM practices are important to maximize revenues in the F&B department. According to Hewitt (1998; cited by Bujisic; et al 2014), there is a particularly important aspect for the success in maximizing the revenue, which is to manage the demand and supply of products, thus increasing the number of customers in the restaurant

rooms, making them spend as much as possible in the acquisition of products. Several restaurants have applied different RRM strategies, such as happy hours, offers in periods of lower demand, entrance fees per day of the week and a different treatment per customer segment.

Comparing with what was referred to in the literature review, Kimes (2004) states that "There are two strategies to consider, duration management and duration redefinition." Miller, J. E; et al, (2002) mention that "one aspect to take into consideration in menu construction is the concept of price and value of each item." For the authors there are 9 factors that influence this concept, which are: competition, service level, customer type, product quality, portion size, environment, meal period, sales mix".

Kimes and Ho (2019) emphasize that implementing RRM usually involves overcoming significant organizational challenges and as it is a completely different approach can encounter some resistance.

3. Methodology

Methodology, according to Prodanov & Freitas (2013, p.26), is a "... set of mental processes or operations employed in research." Regarding its nature, this research project focuses on a quantitative methodology, using the questionnaire as a data collection tool. A deductive research approach was used in the scientific research process. The script was validated, and an online questionnaire was conducted using the Google Forms platform. The distribution channel used to collect the results was e-mail. The questionnaires were conducted in Portuguese, as the study was only intended for entities located in Portugal. During the investigation, 880 questionnaires were sent out and 131 responses were received all completed, in a period between June and August. The instrument used to analyze and process the data collected was Excel.

The research process is considered as a more effective model to develop solutions to solve problems in a planned and systematized way through data collection (Miranda, 2009, cited by Cohen & Manion, 1980; Santos, 1999, 2002). The methodology focuses on the validity of the study and of all the processes chosen along the path that is the research. It is much more than a mere description of the procedures taken, it is also a theoretical explanation about the forms of approach to meet the study objectives (Gerhardt & Silveira (2009, p. 12).

The technical procedure used in the investigation phase was bibliographic research, having been collected information in several scientific articles and books on the topic. During the research, questionnaires were sent out to 880 entities, and 131 responses were received, all of which were completed. In short, only 14.89% responded to the questionnaire. All entities were contacted via phone in the first instance and via email after the phone call was made. The distribution of the questionnaire lasted about 3 months and took place between June and August 2021. To better analyze the data collected through the questionnaire, Excel was used as an analysis program.

To start with the questionnaire, a script was created with questions that are in accordance with the research objectives and the literature review. The interview script is composed of 15 closed questions and 5 open ones. The script is divided into three sections: (i) questions on COVID-19 and on the establishment; (ii) questions on Restaurant Revenue Management and (iii) questions on demographic data. The respondents who answered the questionnaire are mostly general directors, F&B directors, assistant directors and revenue managers. The main age range of the respondents who took part in the questionnaire is between 31 and 40 years and 21 and 30 years. Approximately 52.7% of the respondents have a university degree as their level of education.

4. Results and Discussion

Analysing the results, the respondents demonstrate not to have a concrete idea about the concept of Restaurant Revenue Management (RRM) generally is not known among respondents, as demonstrated in the answers collected during the distribution of the questionnaire, in which 58.8% do not know the concept and only 41.2% of the respondents are acquainted with the concept as shown on table 1.

The total of the 131 respondents, only 41.2% are familiar with the concept of Restaurant Revenue Management, making a total of 54 responses.

Table 1: Knowledge of the Concept of RRM in Portugal

	Degree of knowledge (n)	%
Knowledge	54	41,2%
Without Knowledge	77	58,8%
Total	131	100%

Those who know and apply the concept of RRM consider important their application of It and its respective impact important, about 57.4% consider its application important and while 24.1% considers it very important and 14.8% extremely important, as shown on table 2.

Table 2: Importance of the Concept of RRM

Importance	n	%
Few Important	2	3,7%
Important	31	57,4%
Very importante	13	24,1%
Extremely Important	8	14,8%
Total	54	100%

As shown on table 3, defining the ideal customer was the most important answer with 53.7%, followed by knowledge-based decision making with 37%. In third and last place is the focusing on the sales price with 9,3%.

RRM allows managers, in addition to segmenting the market, to take decisions based on the knowledge that the systems provide according to their historical data, thus enabling the forecasting of demand for the establishment. RRM creates a structure of fixed and variable costs which helps managers in the control of expenses by the establishments and will have an impact on the creation of revenue. Moreover, it will allow the establishment's capacity to be optimized and be aware of various market opportunities.

Table 3: Characteristics of Restaurant Revenue Management Best Known

Characteristics	n	%
Defining the ideal customer based on their characteristics (segmenting the market)	29	53,7%
Taking knowledge-based decisions	20	37%
Creating a fixed and variable cost structure	18	33,3%
Optimizing facility capacity	17	31,7%
Being aware of the several opportunities the market offers	16	29,6%
Total	100	185,3

To increase revenue, the development of various strategies and measures is necessary. The priority measure, for most of the questionnaire respondents, is the development of a quality product and service to the customer. The existence of marketing policies to get the product and service to the ideal customer. The creation and development of menus is a way of presenting the product to the customer and was one of the most frequently mentioned measures in the questionnaire. The training of work teams helps to create value for the company. RRM creates a structure of fixed and variable costs that helps managers in controlling spending by establishments and will impact on revenue creation.

As shown on table 4, service quality is the main factor influencing revenue with 40.7% of the respondents. The other factors are marketing, cross selling, upselling with 27.8% of answers; tasting menu, special menus and

executive menus with for 13% of respondents; also staff training with 11% of answers and creating a structure of fixed and variable costs with 7.4%.

Table 4: Measures and Strategies to Increase Revenue

Measure	n	%
Product and service quality	22	40,7%
Marketing, crossselling, upselling	15	27,8%
Tasting, special and executive menus	7	13%
Work team training	6	11%
Creating a fixed and variable cost structure	4	7,4%
Total	100%	54

For the 54 respondents, whom consider the concept of RRM, the most mentioned advantages were increased revenue with 33%; improved management with 15%; greater efficiency with 13%, more accurate analysis with 13%; defining how to sell the right place, to the right customer, for the right price and for the right duration with 11%; cost control cm 7%; service optimization with 5% and, finally, market segmentation with 3%, as shown on table 5.

RRM is seen as a tool that improves the management of restaurant companies, causing greater efficiency in service. Respondents state that the biggest advantage in applying the RRM concept is the increase in the establishments' revenue. RRM also enables a more accurate analysis of the data generated by daily activity to make better decisions and better forecasts. It is possible, with the application of RRM techniques, to define how to sell the right place, to the right customer, at the right price and for the right duration; control the organization's operating costs; optimize the service and segment the market.

Table 5: Benefits of the RRM

Advantages of RRM	n	%
Increase in revenue	16	33%
Improves management	8	15%
Increased efficiency	7	13%
More accurate analysis	7	13%
Defining how to sell the right place, to the right customer, at the right price and for the right duration	6	11%
Cost Control	4	7%
Optimisation of the service	3	5%
Market segmentation	2	3%
Total	54	100%

The researchers also asked about the disadvantages of the RRM, 25% of the respondents answered that for them there are no disadvantages. Although 6% of the surveyed state that the main disadvantage of RRM is the fact of having to work in the dark, while 11% state that price variation is one of the disadvantages of applying this concept. Around 9% of the respondents say that one of the drawbacks of applying the RRM concept is the cost of application and the fact that some time is lost in defining strategies to better monetize RRM techniques. Finally, 7% affirm that there is a rigid definition at operational level when applying the Restaurant Revenue Management principles, as shown on table 6.

The market is seen as not very mature by those who participated in the study, and they consider it one of the main disadvantages in developing RRM strategies in their organization and working without experience. With the execution of RRM principles, price variation can cause customer dissatisfaction and, for this reason, is considered a disadvantage. The existence of costs in the application of RRM system, the lost time and the rigid definition of the operation should be highlighted.

Table 6: Drawbacks of the RRM Concept

Drawbacks of the RRM concept	n	%
No disadvantages	11	25%
An immature market	10	23%
Working in the dark	7	16%
Variation of prices	5	11%
Some wasted time	4	9%
Costs	4	9%
Rigid definition in operation	3	7%
Total	44	100%

5. Conclusion and Future Research

Restaurant Revenue Management is a tool capable of improving the profitability of restaurants and hotels. Due to the fact that they have certain specific characteristics - such as the existence of a fixed capacity, inventory management, management of the duration of customers' meal times, among others - the Restaurant Revenue Management concept allows a better service organisation as it covers a set of management techniques whose goal is to maximise revenue by providing a panoply of measures for the manager to apply, such as fixed and variable cost control, making decisions based on knowledge, defining the ideal customer according to the concept created, among others.

Therefore, Revenue Management becomes a useful tool for price management, making establishments more competitive with the aim of making the business grow and become sustainable.

The concept of Restaurant Revenue Management generally is not known among F&B departments, as demonstrated in the answers collected during the distribution of the questionnaire, in which 58.8% do not know the concept and only 41.2% of the respondents are acquainted with the concept. Despite this unfamiliarity, many authors state that the concept of RRM is applied in several activity sectors as transcribed: "RRM is a strategy used by companies with the aim of maximizing profit. This strategy applies to airlines, restaurants, golf courses, casinos, resorts, and entertainment events" (Carroll & Grimes, 1995; cited by Bujisic, et al, (2014), Cross, Higbie & Cross: (2009; Kimes: 2003; Relihan III: 1989; cited by Bujisic, et al: 2014), (Bertsimas & Shioda: 2003; Kimes:1999; Kimes, et al: 1999; Kimes, et al: 1998; Susskind, et al: 2004; cit. by Bujisic ; et al: 2014), (Kimes & Singh: 2009; cited by Bujisic ; et al: 2014)), (Hendler & Hendler: 2004; Norrman & Mayer, 1997; cited by Bujisic ; et al: 2014), (Pinchuk: 2006, cited by Bujisic ; et al: 2014), (Volpano 2003, cited by Bujisic ; et al: 2014)).

In this research, the most applied and most important characteristics by those who recognise the concept of RRM is the definition of the ideal client, that is, the segmentation of the market by the establishments. RRM allows managers, in addition to segmenting the market, to take decisions based on the knowledge that the systems provide according to their historical data, thus enabling the forecasting of demand for the establishment. RRM creates a structure of fixed and variable costs which helps managers in the control of expenses by the establishments and will have an impact on the creation of revenue. Moreover, it will allow the establishment's capacity to be optimised and be aware of various market opportunities. The literature review mentions these various characteristics. For Hewitt (1998; cited by Bujisic; et al 2014). "There are several characteristics that are vital to a best practice of RRM in catering namely: perishable inventory, inventory indicators, segmented markets, fixed capacity, predictable fluctuating demand, cost structure, fixed and variable cost, in advance booking, duration management, duration reset, customer arrival uncertainty, overbooking, duration uncertainty, sell time, reduce transition time and price management".

To increase revenue, the development of various strategies is necessary. The priority measure, for most of the questionnaire respondents, is the development of a quality product and service to the customer. The creation and development of menus is a way of presenting the product to the customer and was one of the most frequently mentioned measures in the questionnaire. The training of work teams helps to create value for the company. In other hand RRM creates a structure of fixed and variable costs that helps managers in controlling spending by establishments and will impact on revenue creation.

This research aimed at understanding the principles and characteristics of Revenue Management as a whole and how to apply them in the restaurant business. Our results show that this concept is generally unknown by those who manage restaurants and drinking establishments. On the other hand, those who know the RRM techniques know that they are important for a better management of their establishment.

As a suggestion for future research, since there was poor adherence of the establishments in participating in the study, we recommend an in-depth study on Restaurant Revenue Management, and the existence of a larger sample. In a future study, we also recommend conducting research on Restaurant Profitability Management, and to carry out a comparative analysis of the companies' results.

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