# Bordeaux 2016 Abstract Submission

**Title**

How to maximize the profitability of a restaurant’s wine menu using the diagnostic revenue management technique of menu engineering in a computer simulated environment.

**I want to submit an abstract for:**

Conference Presentation

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**Keywords**

Restaurant Revenue Management; Wine Menu Evaluation; Wine Pricing and Demand; Profitability; Computer Simulations; Menu Engineering.

**Research Question**

Can a restaurant’s wine menu be evaluated from a profitability perspective using revenue management technique of menu engineering in simulated environment? Can a wine menu be structured to maximise profitability?

**Methods**

Revenue management technique of menu engineering applied to restaurant menu focusses on menu wine component. Demand and pricing scenarios are processed through total enterprise simulation and evaluated from profitability perspective.

**Results**

Using the revenue management technique of menu engineering in a simulated environment. Paper demonstrates how demand and pricing scenarios can increase the profitability of a restaurant’s wine menu.

**Abstract**

This paper demonstrates the use of the diagnostic revenue management technique of menu engineering in a total enterprise restaurant simulation. Simr - The Restaurant Simulation uses the menu engineering technique to diagnose and evaluate a restaurant’s alcoholic beverage menu, with an emphasis on the wine component. Revenue management is the application of information systems and pricing strategies to allocate the right capacity to the right customer at the right place at the right time, Smith, B.C. et al (1992), Kimes, S.E. et al
The application of revenue management has been most effective when it is applied to operations that have the following characteristics: relatively fixed capacity, predictable demand, perishable inventory, appropriate cost and pricing structure and demand that is variable and uncertain, Kimes, S.E. (1989); Cross, R.G. (1997). The fixed capacity constraint and demand that is variable and uncertain are the restaurant’s seats and the seasonality of the business. The predictable demand is based on location, time of day, time of year and economic conditions. Perishable inventory is not the food or beverage product but the time during which a seat or table is available. If the seat or table is not occupied then this part of the restauranteur’s inventory perishes. Kimes, S.E. et al (1998). Appropriate cost and pricing structure relate to the relationship between the fixed and variable cost components and as in most businesses fixed costs must be covered before profits can be made. Revenue management principles were first developed for the airline industry then extended to the hotel sector and are now beginning to be used by restaurants. In fact many restaurants use various revenue management type practices, but the application has so far been mostly tactical, Kimes, S.E. et al (1998). As restaurants strive for profitability the menu engineering routine, a revenue management technique, focuses on revenue generation with profitability as the goal. By evaluating individual menu items and rating them on the basis of popularity and profitability the techniques strives to maximise the positive financial effect of a restaurant menu. McEvoy, B. and Martin, D. (2015) have evaluated and tested the menu engineering technique as a menu diagnostic tool to evaluate food menu items in a simulated environment. They demonstrated how the technique could be used to increase the profitability of a food menu. The learning from the use of the technique in the Simr restaurant simulation environment can easily be replicated in a real-world restaurant. This paper uses the Simr restaurant simulation to diagnose and evaluate a simulated restaurant’s beverage menu, with an emphasis on the wine component. The limitations of the menu engineering technique and the simulation to successfully diagnose and change a beverage menu to increase profitability will be discussed and the application of the menu engineering techniques using a spreadsheet template will be examined and illustrated in the context of the simulated restaurant. The technique of menu engineering has been well used and well discussed since its inception by Kasavana, M. & Smith, D. (1982). The Boston Consulting Group developed a four cell matrix for companies to evaluate different business units more easily. Schachter, H. (2004). Kasavana & Smith took this framework and adapted it to menu analysis using the same four cell matrix approach. They concentrated on evaluating a menu item from the standpoint of profitability and popularity arguing that profits will be maximized if the most profitable menu items are the most popular. Their matrix was structured to evaluate a menu on the basis of its profitability and popularity. The developed matrix technique concentrated on food menu items but is easily extended to alcoholic beverages including wine. Classifications were developed separating individual menu items into Stars; Ploughhorses; Puzzles and Dogs based on their profitability and popularity. Atkinson, H. & Jones, P. (1993) used the four P's of marketing - price; product; promotion and place to develop strategies to maximise the profitability of the identified menu item categories. The objectives are to promote the stars; exploit the ploughhorses; solve the puzzles and eliminate the dogs. These strategies are implemented and evaluated in the Simr environment. The Simr restaurant simulation is currently being used as part of both capstone revenue management courses and lower level food and beverage cost control courses in Canadian colleges and universities, as well as in the management training programs of selected restaurant industry multi-unit operators. A simulated restaurant’s wine menu is evaluated using the techniques and after appropriate changes and adjustments are made based on the menu engineering diagnosis the simulation is processed and the simulation actual results are compared and evaluated in the context of the expected results based on the menu engineering diagnostic changes. The paper discusses these results and proposes extensive use of the menu engineering tool to regularly evaluate and test a restaurant’s beverage menu to ensure that its goals of revenue generation and profitability are achieved. When used correctly the technique will ensure that a restaurant does not fall into the failure category that is the fate of many restaurants in Canada, the U.S.A and worldwide.