

## Using Choice Simulations for Ticket Policy Analysis: Exploring the Viability of Student Mini-Ticket Plans for College Football

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Presentation (25-minute)**

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One important concern athletic departments have regarding student ticket policy is the number of tickets or seats available to students for their athletic events. Limiting the number of student tickets can be particularly enticing to many schools, especially for popular sports like football, because more revenue can be generated by selling high-priced tickets to the general public. For example, since 2004, a prominent school such as The Ohio State University has made approximately 4,000 student tickets available to the general public (Gray, 2004). However, one drawback of such policy is that it can potentially generate negative publicity toward athletic departments.

On the other hand, student mini-ticket plans may be a viable option to generate more revenue while avoiding possible negative press. In concept, a mini-ticket plan works similarly to limiting the amount of tickets to students in possibly freeing tickets to the general public. However, one important difference is that mini-ticket plans can be offered in a way to sway students to attend fewer games as opposed to restricting their access to games. The logic is simple. The more students select mini-plans, the more seats become available to the general public. In fact, many students, perhaps the ones less identified with a team, may prefer to pay less for a ticket containing fewer games. Fresno State and Texas A&M University, for instance, have just introduced mini-ticket plans to the 2006-2007 basketball seasons (Ticket Mini-Plans Announced For 2006-07 Men's and Women's Basketball Seasons, n.d.)

Although mini-ticket plans can be a viable option as a revenue-generating option to athletic departments, very little work have been done to assess the value of such strategy. At least three questions emanate from the discussion above in regard to introducing new mini-ticket plans:

- a) What is the potential revenue that can be gained from this strategy?
- b) If a mini-ticket plan is introduced, how would the new ticket plan impact (or cannibalize) other ticket offerings?
- c) Who would be more likely to buy the mini-ticket plans?

This presentation aims at answering these research questions by using a choice simulator derived from a carefully designed choice experiment. In particular, the objective of this presentation is to introduce a choice simulator as a tool to address particular managerial problems. A choice simulator is one of the most interesting parts that results from a conjoint or discrete choice project because they are used to answer "what if" questions of managerial and substantive interest (Louviere et al., 2000; Orme, 2006). In discrete choice experiments, individuals are exposed to a series of choice scenarios. In each scenario, individuals are forced to trade-off important features of a product such as a higher price for a better seat. Based on the choices each individual make, the analysis can reveal the relative importance of features to each individuals' decision-making and their preferences (or utilities) for levels of features. Choice simulators use these derived preferences associated with features to predict individuals' choices given different "what-if" scenarios, such as the introduction of a new product (mini-ticket plans in this case).

The analysis was based on 420 students selected using a two-stage cluster sampling procedure from a sample of 8,000 students enrolled in a mandatory physical education program in a large Southwestern university. The sample consisted of 64% females and 35% males, and was predominantly Caucasian (76%) between the age of 18 and 25 (96%). These 420 students completed an online survey containing four parts: a) ticket usage and attendance patterns, b) identification measures (Wann & Branscombe, 1993), c) a discrete choice experiment, and d) demographic characteristics.

In the discrete choice experiment, students were exposed to fourteen scenarios. In each scenario, they were offered three options: a) a football-only season ticket, b) a all-sport season ticket, and c) none of the tickets. The two ticket options varied in five other attributes, including, price, the presence of rivalries, number of games in ticket, location of seat in terms of level and centrality. Students' choices were analyzed at the individual level using Hierarchical Bayes multinomial logit model (Allenby & Ginter, 1995).

The choice simulation was conducted by following the steps outlined by Louviere et al. (2000). The steps were: (1) definition of a base case, (2) analysis of individual attributes, and (3) policy analysis. First, a base case was defined by simulating choices for the current ticket offerings by the school. The comparison between the predicted base case and the actual individuals' choices of

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ticket plan indicated a close fit of the model. In addition, predictive validity was measured by examining predictions of two scenarios not used in the estimation of the model. Results indicated an average of 66% correct classification of choices across the two scenarios, which correspond to 100% improvement in prediction from chance alone.

The main simulation of interest was performed by introducing a new ticket plan to the base case scenario, where observations could be made regarding individuals' switches from one ticket plan option to another given the assumptions of ticket features and prices. Once the introduction of a new ticket plan was simulated, the analysis revealed how many students were predicted to switch to the min-ticket plan and their individual characteristics (e.g., levels of identification, demographics, etc.).

Results indicate that if three-game ticket plans for football-tickets were offered at half-price (including a rivalry game) in reasonable seats, they would be attractive to up to 24% of the students interviewed. This signified that potentially many seats assigned to students could become available for the three games not included in the student mini-ticket plans. Depending on the assumption of price that could be charged to the general public, the analysis indicated that the mini-ticket plan option has the potential to be a revenue-generating option. Furthermore, the simulator indicated that although the mini-ticket plan drew its shares from other ticket plans and from non-buyers, the switches were more pronounced from the football-only ticket plans. Finally, the students most attracted to mini-ticket plans were those least identified with the football team.

It is important to highlight that simulations are based on very controlled conditions (Orme, 2006). Market simulators assume that: a) respondents are aware of all ticket options, b) tickets are distributed equally, c) tickets are always available, d) there is long-range equilibrium between offerings, and e) all tickets are promoted equally (equal effectiveness of sales force). The degree to which market conditions match the controlled conditions assumed in market simulation dictates whether the results can closely mimic market shares in the future. Therefore, predictions from market simulators are normally interpreted as relative indicators of preference, not absolute market shares (Orme, 2006). Notwithstanding these limitations, the market simulation tool was useful to identify the viability of mini-ticket option by revealing students' preferences for ticket options.