POMS 2013 Teaching Revenue Management Panel Discussion

Date/Time: Sunday, May 5th, 2:45 PM - 4:15 PM

Location: Spruce

Panelists: John Birge, University of Chicago

Metin Cakanyildirim, University of Texas at Dallas

Mark Ferguson, University of South Carolina

Dan Zhang, University of Colorado at Boulder

Moderator: John Turner, University of California at Irvine

Track Chair: Itir Karaesmen Aydin, American University

List of Questions

1. Please say a few words about yourself, how long you have been teaching RM, and whether you teach RM as part of a full course or as a component or module in another OR/OM course.

Demand and Revenue Management, separate 3-credit hour graduate level course taught 4 times in Autumns of 2009, 2010, 2011, 2012.

1. What are some of the main topics that you cover in your course, and which topics seem to be favorites among students?

3 Modules make up the course: I. Demand Management, II. Revenue Management, III. Other Pricing Contexts (Miscellaneous). Revenue Management focuses on Airlines and Hospitality industry and attracts more student attention than others.

1. What name do you use for your course? Revenue Management, Pricing and Revenue Optimization, Demand Management and Price Optimization are some course titles that I have seen.

Demand and Revenue Management

1. RM has the potential to be a very technical course requiring the use of statistical and optimization models, as well as specialized software. On the other hand, managerial insights can often be introduced by reasoning about the nature of opportunity costs without getting into the details of specific models. At what end of the spectrum is your class? Would you say it is very quantitative, mostly quantitative, has a good balance of quant + intuition, mostly strategic, or very strategic?

I have a little bit of everything. Here are the extreme examples. When I teach demand estimation, I venture into multi-choice logit model (associated probabilities) and their estimation in R software. This is the as extreme as I get in terms of statistics. When I teach pricing two products with a joint capacity constraint, I slightly venture it into nonlinear programming. I draw plenty of pictures (of feasible region, objective function, normal lines). This is the as extreme as I get in terms of optimization.

1. What types of learning assessment tools do you use most? Cases, homework assignments, written projects, or class presentations? What has worked well, and what has not?

I have "Contribution to Class Discussion", 2 "Exams", 4-5 "Homework Assignments", a "Written Project Report" and its "Presentation".

1. Are there specific cases or simulators that work particularly well?

I tried Car Rental Simulation game several times. Car rental industry is introduced with a lecture in the second or third week of the class. Game is played in the slow trial mode in groups over 12 weeks by setting 1 months' prices in each week. Revenue results are briefly discussed in the class. Students can play a final run and the group with the highest revenue gets some extra credit.

1. What software do students typically use to solve problems?

Excel spreadsheet.

1. Do you invite guest speakers? If so, how do you find and select guest speakers? What direction, if any, do you give to guest speakers to ensure that the topics they discuss complement issues discussed in lectures?

I bring about 1 speaker per semester. Speakers came from Sabre and Airlines. I ask them to spend their time on what their company does in general and their current project in specific.

1. Does your course have prerequisites, or do you eschew prerequisites in the hope of attracting more students? How does RM at your school fit in with other courses in the curriculum, such as marketing or operations? (Or, if your course has RM as a sub-component, how does it fit into the overarching course?)

It has prerequisites but I occasionally eschew them to attract students. RM is a separate course. Our core operations course does not teach any/much RM. Our marketing area teaches pricing courses. I distinguish my course by focusing on specific application areas: Airlines, Hotels, Car rental, etc. I also put more emphasis on capacity, network effects and discussion of dynamics.

1. What advice would you give to those of us starting to teach RM? With the benefit of perfect hindsight, what things would you highly recommend, and what would you avoid?

They should find a good or ok textbook. Starting things without a textbook is hard. Over time, they can bring in additional material (cases, course notes, articles). This is continuous improvement. Do not be a perfectionist.