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.

Revenue Management, semester-long MBA elective taught 8 years at Georgia Tech and 2 years at the University of South Carolina. Started the course as Supply Chain Analytics and Revenue Management but turned the supply chain part into a separate course after the first three years. Became one of the most popular elective courses at Ga Tech and USC.

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

There are three main parts to the course, taught in this order: 1) Forecasting (time series and promotion effect), 2) Yield Management (via quantity-control RM & overbooking) and 3) Pricing Analytics (including price elasticity, segmentation, and consumer behavior effects). Forecasting is always one of the favorites because all of the students feel like they need to know more about forecasting. B2B pricing is also very popular.

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.

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 warn the students up front that it is a data intensive course. We use Excel as much as possible, and I let the students work in groups so that the ones with less advanced excel skills can learn from their peers. I have them actually apply the methods to a sample dataset before we cover the topic in class. This raises the interest during class time because they realize it is not trivial. Some students love this approach and some hate it. Most of them appreciate it by the end of the class though and tell me they learned much more this way.

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 moved away from cases because there are so many solutions available online for the popular cases. Instead, the assessment is all on the projects and homeworks. The student work as a team on a final project and their final presentation is ranked against the other projects by an outside the class set of judges. Almost all grading is done on a relative ranking scale, something like highest expected profit or the best fitting model to a holdout sample. This minimizes the subjective grading from me and instills a sense of competition in the assigments.

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

I have used the rental car pricing simulation from HBS but am only lukewarm on it.

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

Excel + Risk Solver Platform + some SAS or SPSS.

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 had 4 – 5 guest speakers a semester when I taught in Atlanta but only use 2 at USC because the location is not as convenient. I use my contacts to recruit speakers and meet with them before the class to talk about how their talk will fit in with what we are covering. I’ve found that the RM software providers give very good talks because they have polished presentations for their sales teams. I try to balance this with speakers from the customer side (airline, hotel, retailer, etc.).

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?)

I do not have prerequisites, to attract students, but I recommend that they have a lot of Excel experience. If they don’t, I recommend they take the HBS Advanced Excel online course before the class. The class fits with our new emphasis on Business Analytics. Other classes that I try to integrate with are the data mining class and the pricing class from the marketing department.

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?

Most students are hungry for marketable skills so you have to show them how the stuff you teach will be useful in their careers. I spend a fair amount of time developing a network to try to match potential employers with students. I created a LinkedIn group of all the students who have taken my class and I post job announcements to this group.

Something to avoid – creating very open ended projects that take a long time to grade. This is fine with small classes but becomes unmanageable when the size increases (my last class was 70 students). Thus, I spend more time up front now, structuring the assignments so that they are easier to grade.