**NYU Stern School of Business**
**Department of Information, Operations & Management Sciences**
OPERATIONS MANAGEMENT RESEARCH SEMINAR

**TOPIC: The Operational Advantages of Threshold Discounting Offers**
**SPEAKER: Simone Marinesi (Wharton)**
**DATE: Wednesday, February 24, 2016**
**TIME: 11:00 AM-12:00PM**
**PLACE: KMC 3-60**


## ABSTRACT

We study the use of threshold discounting, the practice of offering a discounted price service only if at least a given number of customers show interest in it, pioneered by Groupon in the multi-billion-dollar online deals industry. We model a capacity-constrained firm servicing a random-sized population of strategic customers in two representative time periods, a desirable hot period and a less desirable slow period. A comparison with traditional approaches (slow period discounting and closure) reveals that threshold discounting boosts the firm's operational performance on account of two advantages. First, the contingent discount incentivizes slow period consumption when the market for the service is large and reduces supply of the service when the market is small, in effect allowing the firm to respond to the service's unobserved market potential. Second, activation of the threshold discount signals the market state to strategic customers, giving them with information on service availability, and inducing them into self-selecting the consumption period to one that improves the firm's capacity utilization and profit. Unlike in typical settings with strategic customers, strategic customer behavior in our setting is often beneficial for the firm. Threshold discounting delivers most value in situations with high demand seasonality but it can be harmful in situations with chronically low demand, or when customers have high transaction costs. Further, when threshold discounts are offered through an intermediary, we find that the arrangements most used in practice distort the incentives of the intermediary, which can severely diminish the advantages of threshold discounting. We conclude with a numerical study calibrated on data from the opera house Teatro Regio in Torino, Italy, where we consider a number of market and customer behavior scenarios to estimate that threshold discounting improves firm profits over traditional approaches by as much as 28% (7% on average) and makes the firm's profits more resilient to increasing levels of market uncertainty.


## BIO

Simone Marinesi is an assistant professor at the Wharton School. His research interests lie at the interface of operations, economics, and marketing. He is interested in studying how new technologies can be leveraged to expand the possibility of interactions between firms and customers, and how carefully designing such interactions can enable information transmission and allow coordination, for the benefit of both firms and customers. Simone Marinesi holds a

Bachelor and MSc in Industrial Engineering from Universita' di Bologna, Italy, and a PhD in Management (Technology and Operations Management) from INSEAD, France. Before joining INSEAD, he has worked as a management consultant for several years in different industries--natural gas distribution and commercialization, wine production, insurance, oil equipment manufacturing, among others.