



The University of Chicago  
Department of Statistics

Master's Thesis Presentation

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**The Grand Re-Opening: Modeling Week 1 DVD Sales**

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### **ABSTRACT**

Observing trends and forecasting effects in markets with rapidly-changing environments present a modern, unique challenge as there may be a dearth of historical data. This can be especially problematic in industries where the bulk of revenue is generated at the point of launch/impact much more so than any other point in the product's life-cycle. In addition, when releasing a product via a different media format there may be carryover effects from the product's previous media release. This paper endeavors to model Week 1 DVD sales based on relatively short histories by addressing the question: What are the factors that affect a DVD's Week 1 Sales and can a feasible model be developed in order to show the extent that these factors have? During model development we take into account (1) movie sales performance, content, and other related characteristics, (2) seasonality of demand, (3) economic climate, (4) competition, (5) studio marketing actions, and (6) expectations for the film. We then propose initial and secondary regression models and propose methods studios could use to maximize Week 1 sales.