

Test Preparation Services: A Market Analysis Workshop

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MSEL Program

- ❑ Masters of Science in Management in Entrepreneurial Leadership
 - ❑ One year business program
 - ❑ Two seven week courses in second half of fall: Data Exploration and Entrepreneurial Economics
 - ❑ Need a joint project that incorporates quantitative and economic analysis

- ❑ Two consecutive workshops
 - ❑ Students are divided into groups of six
 - ❑ Must create a firm to enter the market to SAT preparation services
 - ❑ Given fabricated data on existing firms in the market
 - ❑ Must make a series of strategic decisions based on quantitative analysis

Workshop I Setup

- ❑ Starting information

- ❑ Four existing firms: two sell in-person tutoring services and two sell access to online practice modules
 - ❑ Price and quantity data for all four firms based on 120 hypothetical zip codes

- ❑ Seed Money

- ❑ Each group has \$50,000 in seed money to conduct market research
 - ❑ Four other data series about the zip codes: median DPI, median housing price, geographic region, and population density indicator
 - ❑ Four market analyses of existing firms including cost structure
 - ❑ Each data series and market analysis costs \$10,000

Workshop I Deliverables

☐ Quantitative Deliverables

- ☐ Provide summary statistics

- ☐ Run a difference in means hypothesis test using one purchased data series

☐ Economic Deliverables

- ☐ Focus on a market segment based on hypothesis test

- ☐ Estimate own cost structure based on market research of existing firms

- ☐ Describe market strategy using Porter's five competitive forces

- ☐ Five minute presentation (20%) and short reflection essay (20%)

Workshop I Choices

1. Which product to sell: in-person tutoring or online modules?
2. Which market segment to focus on?
3. How much to borrow at 3% interest to cover capital and fixed costs?
4. Which of the five competitive forces to exploit?
5. What average price to set for your product?

Workshop II Setup

- ❑ Input Workshop I decisions in a Gauss program
 - ❑ Prices are randomized to provide information about the market
 - ❑ Creates a demand function based on choices
 - ❑ Generates new price and quantity data for four existing firms and the new entrant
 - ❑ All groups are given all supplemental data series and market research

- ❑ Groups need to analyze data generated by entry into the market
 - ❑ ET&A: Entrepreneurial Thought & Action
 - ❑ Adjust strategy based on the data given
 - ❑ Firms that did not borrow enough to cover capital and fixed costs → borrow more at 6% interest

Workshop II Deliverables

- ❑ Quantitative Deliverables

- ❑ Regression analysis to estimate firm's demand function

- ❑ Economic Deliverables

- ❑ Sophisticated pricing strategy
 - ❑ Consider ethical issues

- ❑ Five minute presentation (20%), short reflection essay (20%), and peer review (20%)

Outcome

- ❑ Run Gauss code with new pricing strategy → determine new firm's market value
 - ❑ Determine value of existing capital
 - ❑ Subtract outstanding loan remaining
 - ❑ Add present discounted value of current profits using 3% interest rate

- ❑ Firm with the highest market value wins the competition
 - ❑ Five bonus points awards to the winner

Survey Results

Question (scale from 1-5)	Pre-W1	Pre-W2	Post-W2
Rate your overall interest in Entrepreneurial Economics (ECN6111).	4.12	4.13	4.19
Rate your overall interest in Data Exploration (QTM6110).	3.87	4.07	4.02
How comfortable are you applying Entrepreneurial Economics theories to a market analysis?	3.57	3.85	3.98
How comfortable are you applying Data Exploration techniques to a market analysis?	3.27	3.57	3.76
How useful do you find materials from Data Exploration in the application of Entrepreneurial Economics problems?	3.60	3.85	4.13
How useful do you find materials from Entrepreneurial Economics as a context for learning concepts in Data Exploration?	3.67	3.80	4.13

Select Quotes from Reflection Essays

“In addition, it was helpful to apply what we learned in class to a real-life scenario and see lessons from both classes intertwined, where we even got results on how we did financially.”

“While the work we completed over the last two workshops was often stressful, challenging, and complicated, there were some key takeaways and learnings that we received from participating in the high speed workshop. First, we learned to appreciate the overlap between QTM and economics. While each is its own field, in this workshop, we saw first hand how important understanding market context while practicing statistical methods really is. In order to correctly run and interpret our regressions, we needed to understand economics.”

“Additionally, we learned that teamwork is essential in a workshop environment like this. It was much harder to complete the work when group members were missing. These workshops were difficult, but tested our abilities to tackle real-world data and pricing strategies for an actual product - something we will most likely be doing as future entrepreneurs.”

Thank You

JOSH STAVELEY-O'CARROLL

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