



Re-Charting the Waters: Optimizing Net Tuition Revenue in a Down Economy

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Presented by: Kathy Kurz
Scannell & Kurz, Inc.
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SCANNELL & KURZ, INC.



Agenda

- The changing environment
- Questions to answer about price & aid
- Organizing and analyzing internal data
- Gathering external data
- Best practices to consider in financial aid



The changing environment

- As of the first quarter of 2009, FAFSA filers for fall 2009 had increased by 20% over the first quarter of 2008 for a total increase of almost 1.9 million filers.
- Many institutions are facing lagging deposits and increased financial aid appeals.
- Many schools have been responding more generously to those appeals this year than in the past.
- Total past due balances for current students have increased at many institutions.



The changing environment

- Admissions and financial aid staff felt that they were traveling through uncharted waters, because past analysis of responses to aid offers was assumed to no longer be relevant.
- Before the fall board meeting, it will be critical to re-chart the waters and develop a new plan for the fall 2010 recruitment and awarding cycle.



Key Questions to Answer with Data

- Are you still perceived as worth the price you are charging?
- Have you effectively made the case for affordability?
- How much aid do you need to spend to meet new student enrollment goals in the new economy?
- Are you spending your aid resources wisely?



The danger of the anecdote

- Some things are easier to admit than others (“I can’t afford it” versus “Am I worth it”).
- Patterns are difficult to discern and so interventions aren’t targeted.
- The voices of those that drift away aren’t heard.



Organizing internal data

- Pull individual level admissions and financial aid data on all admits. Ideally three years of data would be available.
- The file would include matriculation status, need, aid offers, student quality measures, and other student demographic information.
- To study retention as well, add, at a minimum Term 1 GPA and enrollment flags for Terms 2 and 3.



Analyzing Internal Data

- Use **table analysis** and (if possible) **econometric modeling** and simulation techniques to analyze in detail:
 - The degree to which various factors (quality, geography, affiliation, need, etc.) influence probability of enrolling new freshmen and transfers and retaining freshmen to their sophomore year.
 - Current price sensitivity of admits and enrolled students
 - The discounted price at which net tuition revenues would maximize
 - The impact of financial aid strategies on the size and composition of the entering class and on retention.



Yield Tables

- These Data Can Be Segmented By:
 - Freshman vs. transfer
 - Academic area
 - Gender
 - Quality of student
 - Ethnic group
 - Etc.



Yield Tables

- These tables are used to identify breakpoints in yield by subpopulation, and then to examine the impact of aid on enrollment behavior for targeted groups.
- It will be important to look at both year specific data as well as reports combining multiple years of data in order to understand how the fall 2009 experience was different from prior years.

Sample Yield Table

	2007			2008			2009		
	Admit	Enroll	Yield	Admit	Enroll	Yield	Admit	Enroll	Yield
	1000	400	40.0%	1200	420	35.0%	1500	380	25.3%
<i>Academic Division</i>									
Arts & Sciences	350	150	42.9%	435	140	32.2%	475	75	15.8%
Educ.	275	95	34.5%	280	110	39.3%	375	125	33.3%
Engineering	175	60	34.3%	180	80	44.4%	275	115	41.8%
Undecided	200	95	47.5%	305	90	29.5%	375	65	17.3%

Sample Need by Grant Chart For Engineering Students

Tuition = \$15,000

	>\$6000						
	\$4000-\$6000					25/100	25%
Gift Aid	\$2000-\$4000					16/80	20%
	\$1-\$2000					8/40	20%
	\$0						
		\$0	\$1-\$2k	\$2k-\$4k	\$4k-\$6k	\$6k-\$8k	> \$8k
					Need		

Cost Benefit Analysis

- Current NTR:
 - 8 * \$14,000
 - 16 * \$12,000
 - 25 * \$10,000 = 49 enrolled - \$554,000
- Projected NTR
 - 20% * 220 = 44
 - 44 * \$14,000 = \$616,000
- Projected Gain in NTR = \$62,000

Sample Retention Table

Retention by Level of Unmet Need and Academic Area				
College	A&S	EDUC	ENGIN	UNDEC
Unmet Need (Need - Grant)				
No Aid App	35%	37%	35%	32%
No Unmet Need	78%	80%	79%	72%
Unmet Need \$1 - \$4,000	82%	78%	77%	75%
Unmet need \$4,001 - \$8,000	77%	75%	79%	70%
Unmet need \$8,000 +	50%	52%	77%	38%



Econometric Modeling

- Ability to consider many more variables in the analysis (solves the small numbers problem)
- Detailed simulations of potential policy and strategic changes—“what if” scenarios
- More powerful tradeoff analysis



Goals of Econometric Modeling

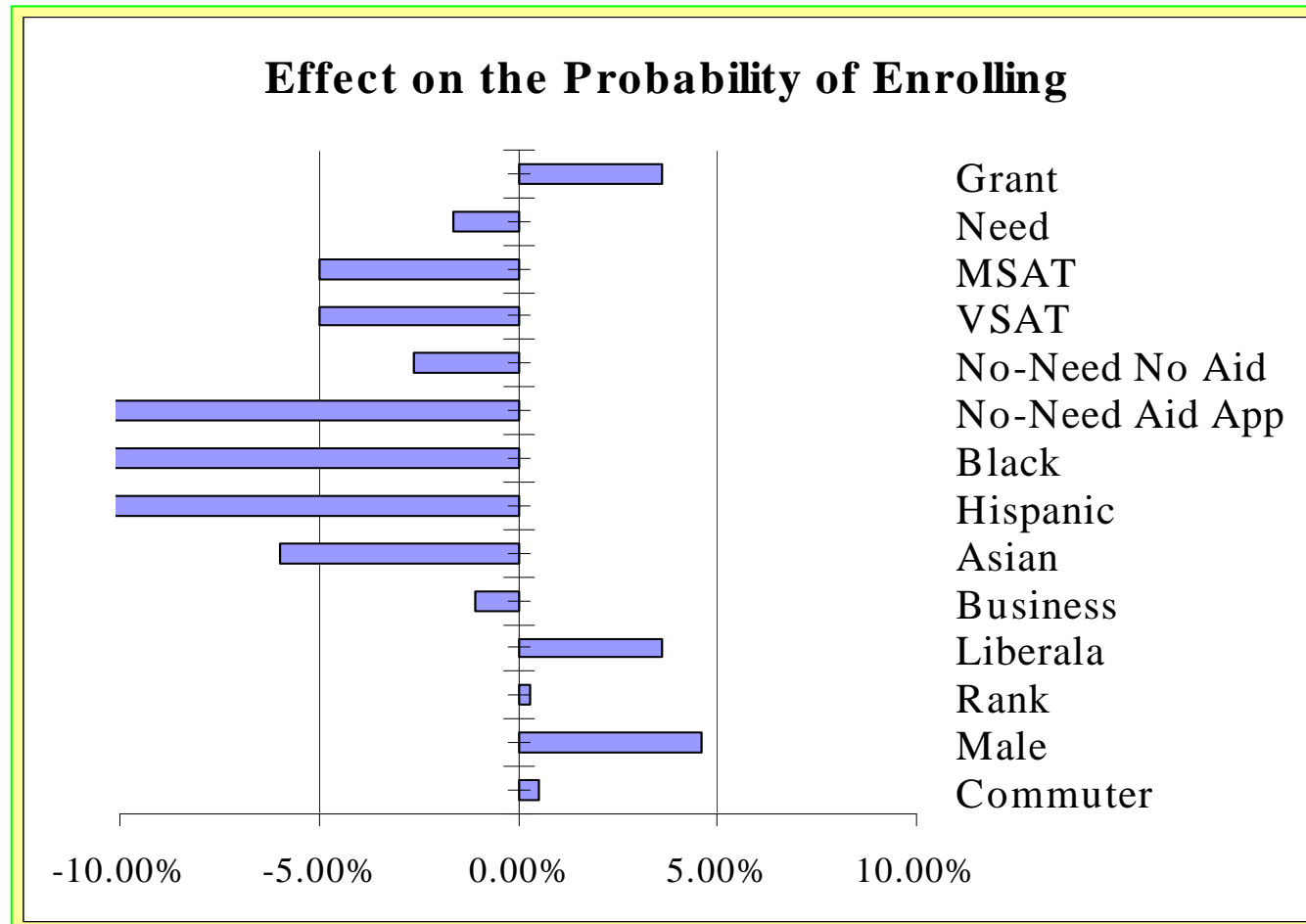
- To identify factors that are important in the enrollment/re-enrollment decision
- To determine the impact of institutional grants on the probability of enrolling/re-enrolling
- To determine the revenue-maximizing levels of grants
- To recommend alternative financial aid packaging strategies that advance the campus toward its stated enrollment goals
- To simulate the results of alternative pricing and aid strategies to understand the impact on enrollments, NTR, and other class characteristics



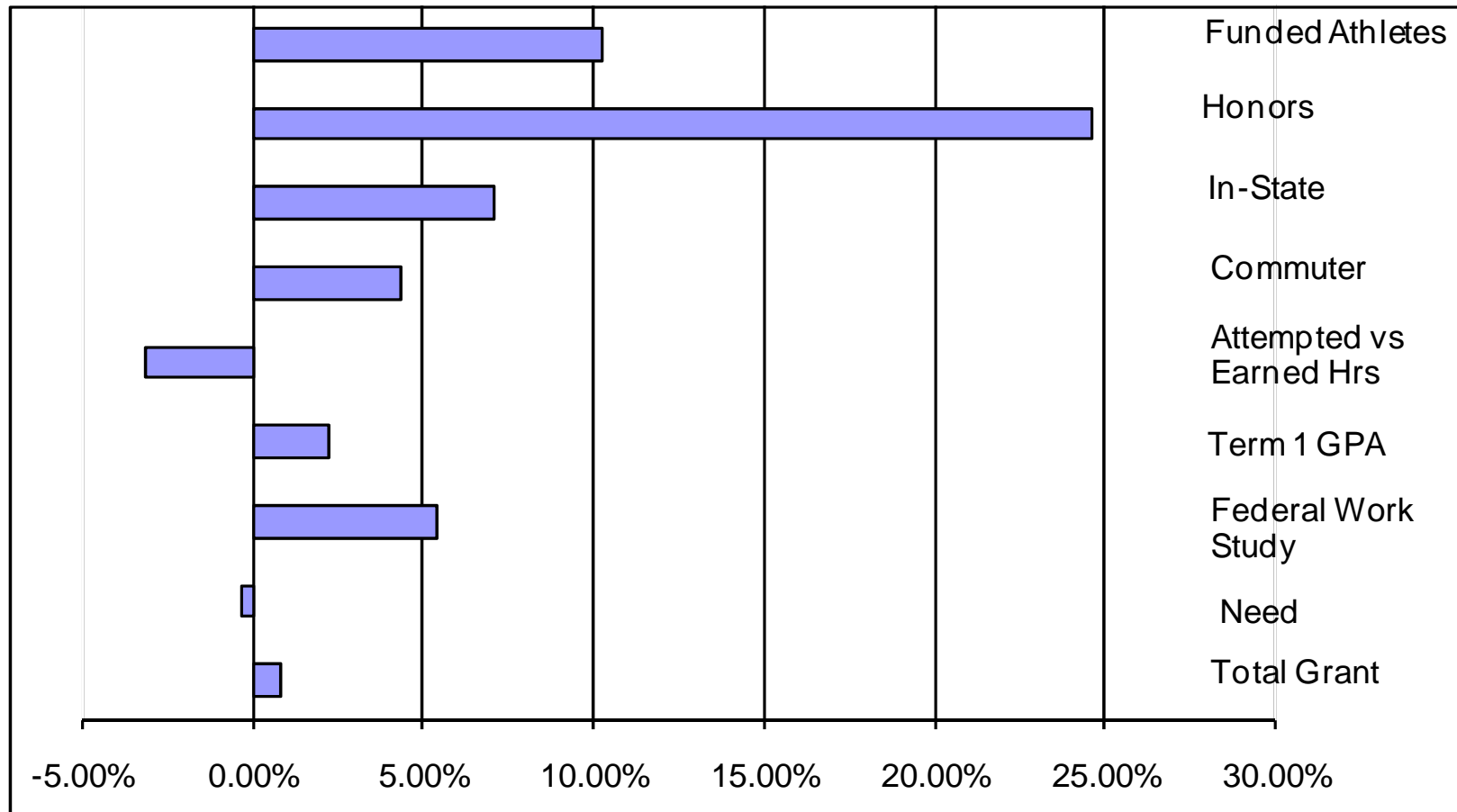
Econometric Modeling: Step One

- The probability of enrollment (re-enrollment) for each student is determined as a function of individual student characteristics appropriate for the institution.
 - Probability of Enrolling (Student)
 - = f (Student Need, Total Grant, Other student characteristics)

Sample Enrollment Probability Model: New Students



Sample Enrollment Probability Model: Returning Students





Enrollment Probability Models

- If necessary, multiple models may need to be created:
 - Freshman versus transfer matriculation
 - Freshman to sophomore retention for achievers versus non-achievers
 - Fall 2009 versus prior years



Econometric Modeling Step Two: Exploring Price Sensitivity

In general, when grants to an admit are increased two things happen:

1. The probability the student will matriculate (or re-enroll) increases.
2. The amount of net tuition revenue that will be received from the student declines.

Net Tuition Revenue = Tuition - Grant

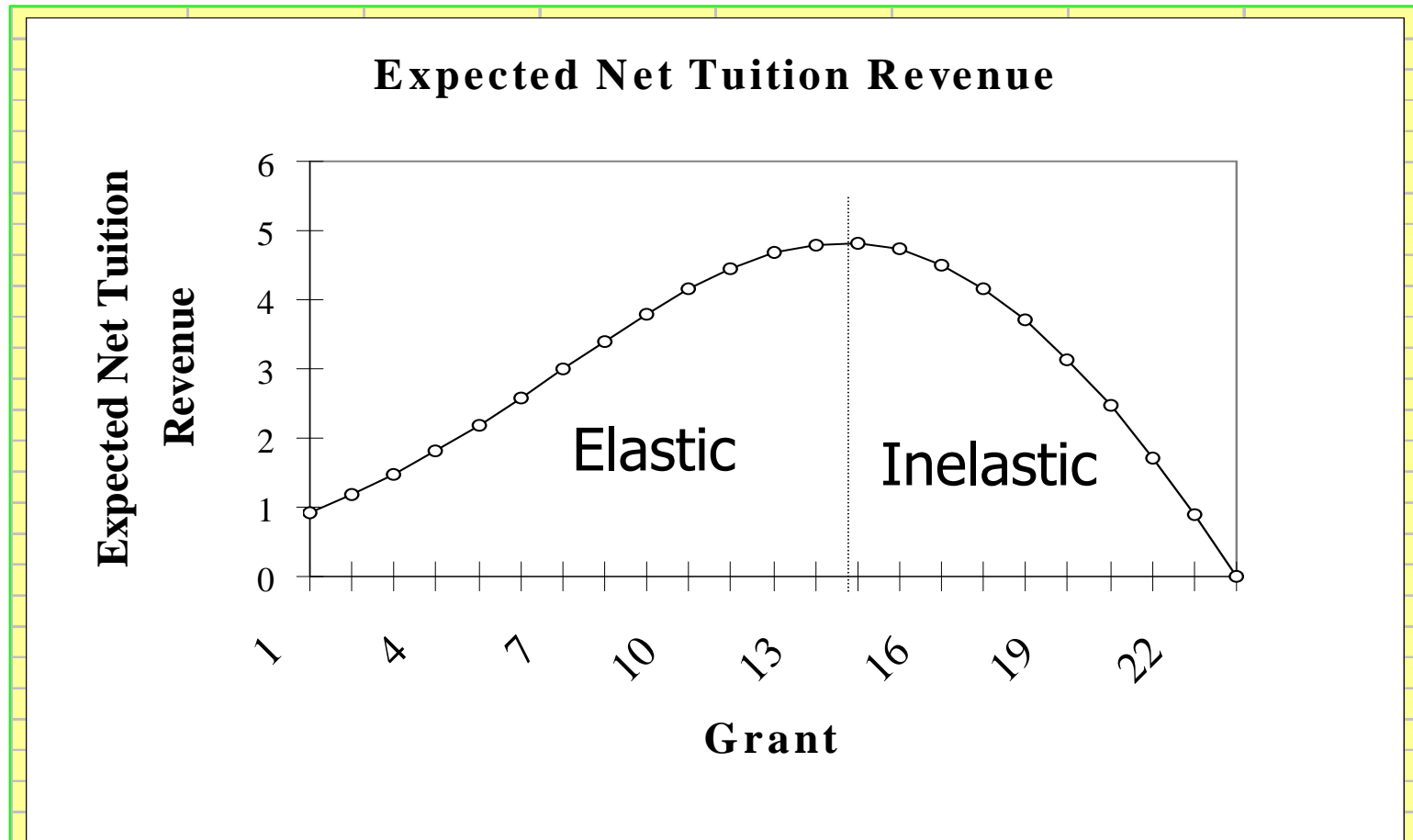


Econometric Modeling Step Two: Exploring Price Sensitivity

- Depending on the magnitude of the change in the probability of enrollment, increasing grant may either raise or lower expected net tuition revenue.
 - Expected tuition revenue
 - $= (\text{probability of enrolling}) * (\text{net tuition charges})$

Exploring Price Sensitivity

Elasticity Tells You Which Side Of The Peak You Are On.





Econometric Modeling Step Three: Simulation of New Financial Aid Strategies

- Information about the price sensitivity of various subpopulations can be used to identify potential changes in policy
- The models can then be used to simulate the impact of those changes on net tuition revenue and, perhaps more importantly, on other characteristics of the entering or returning class.



Simulation of New Financial Aid Strategies

- Did our responses to appeals in fall 2009 increase or decrease NTR?
- Are new investments in aid needed to meet our enrollment goals in the new economic environment?
- What tradeoffs are possible between enrollment goals (e.g., NTR, class size, quality, diversity...)?
- How much will increasing grant impact retention? Would other investments have a bigger impact on retention?



Typical Findings that Increase NTR

- Guaranteeing aid can be a powerful tool for building demand from qualified students.
- But, stacking entitlements can lead to students with a higher propensity to enroll receiving more aid than is ideal, and thus reducing NTR.
- Responding to appeals often reduces NTR, although it may increase enrollments.
- Enrollment goals (e.g. for quality or diversity) are often set without an understanding of the financial implications.



Gathering External Data

- Economic and Demographic data for your primary markets

Sample Market-driven Enrollment Planning

Fall 2012	Athletes	Journalism	Upstate	Long Island	Other NY	PA	OH	NJ	Other	Total
Market *	NA	9487	59679	39898	79444	141572	129296	108199	2666929	3225017
Inquiry	65	949	5371	798	2463	1982	1293	1407	8001	22328
Market Share	NA	10.0%	9.0%	2.0%	3.1%	1.4%	1.0%	1.3%	0.3%	
App	65	241	1021	72	234	121	58	117	368	2296
Conversion Rate	100.0%	25.4%	19.0%	9.0%	9.5%	6.1%	4.5%	8.3%	4.6%	10.3%
Admit	64	207	898	65	143	106	54	106	294	1938
Admit Rate	98.5%	86.0%	88.0%	91.0%	61.0%	88.0%	92.0%	91.0%	80.0%	84.4%
Enroll	62	91	323	21	47	35	14	44	77	714
Yield	96.9%	44.0%	36.0%	32.0%	33.0%	33.0%	26.0%	41.0%	26.0%	36.8%

* Market figures for Journalism are based on SAT test-takers in NY, NJ, OH, and PA who expressed interest in Communications
Market figures for geo regions are based on actual or projected high school graduation figures.



Gathering External Data

- **Competitor Information**
 - ASQ
 - National Student Clearinghouse
 - Benchmarking using publicly available information

Sample Benchmarking on Price and Prestige

College/University	Tuition & Fees 2009-10	Freshman Discount Rate 2006-07	Fall 2007 Accept Rate	Fall 2007 SAT 25-75%	U.S.News Ranking 2009 (America's Best Colleges)
Institution A	\$23,574	44.6%	83%	930-1160	Univ-Master's (North) - Tier 1
Institution B	\$24,230	40.9%	66%	990-1190	Univ-Master's (Midwest) - Tier 1
Institution C	\$24,351	33.2%	66%	950-1160	Univ-Master's (North) - Tier 1
Institution D	\$25,785	50.5%	92%	910-1150	Univ-Master's (North) - Tier 1
Institution E	\$28,040	50.9%	71%	950-1160	Liberal Arts Colleges - Tier 1
Institution F	\$28,840	41.6%	86%	990-1190	Univ-Master's (Midwest) - Tier 1
Institution G	\$29,512	50.7%	79%	990-1190	Univ-Master's (North) - Tier 1
Institution H	\$33,560	45.5%	57%	1115-1310	Liberal Arts Colleges - Tier 1

Sources: IPEDS, Institutional Websites, and US News & World Report



Best Practices to Consider

- Engage the CFO in reviewing the data to ensure buy-in if more funds are needed.
- Educate the Board about the factors that impact the discount rate and NTR:
 - Competitive environment
 - Yield and retention of aided and non-aided students (willingness to pay)
 - External support (e.g., federal and state aid)
 - Institutional mission and goals
 - Changes in ability to pay



Best Practices to Consider

- Use all funds (including endowed aid and SEOG) in support of your strategies.
- Avoid offering lower packages up front in order to “save” funds for appeals.
- Make your strategies as transparent as possible in order to communicate affordability.
- Communicate merit award eligibility and send need-based packages as soon as feasibly possible.



Conclusion: Ingredients for Successful Strategizing

- Using data to re-chart the waters
- + Lessons learned from experienced practitioners
- + Institutional context and values
- = Well-founded and informed pricing and discounting policy decisions



Contact Information

Kathy Kurz
Scannell & Kurz, Inc.
71-B Monroe Avenue
Pittsford, NY 14534
(585) 381-1120

kurz@scannellkurz.com

www.ScannellKurz.com

SCANNELL & KURZ, INC.