



# Understanding Enrollment Goal Tradeoffs

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Council of Independent Colleges  
National Institute for Chief Academic Officers  
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# The Problem: Wanting it All

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- At many institutions, there is a lack of understanding that some enrollment goals may be mutually exclusive.
- Consequently, institutions (often trustees or the senior team) say they want it all:
  - Better quality profile
  - Lower discount rate
  - Larger freshman class
  - Improved retention
  - More diversity (economic, ethnic, geographic)



# The Answer: Data

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- A data-driven understanding of the tradeoffs is critical to setting reasonable expectations.



# Enrollment Goals and Their Impact on the Academic Program

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- CAOs typically understand how various enrollment goals could impact the academic program, at least in general terms:
  - Larger freshman classes = more sections of general education courses.
  - If growth comes at the expense of selectivity, more academic support services may be required.
  - Growth is frequently concentrated in popular programs that are already close to capacity.
  - Achieving more ethnic diversity among students may require a more ethnically diverse faculty.



# Enrollment Goal Tradeoffs

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- However, campus-wide there is often not a data-driven understanding of how achieving one enrollment goal will impact the achievement of others:
  - Class size versus the academic profile;
  - Academic program mix versus profile;
  - Various enrollment goals versus NTR;
  - Recruitment versus retention.



# Discussion Questions

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- What are your institution's enrollment goals?
- How were those goals set?
- How much is understood on campus about tradeoffs between those goals?



# Enrollment Goal Tradeoffs (cont'd)

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- This workshop will focus on the data and analytical techniques available to help an institution best understand these tradeoffs.



# Understanding Tradeoffs: Size Versus Profile

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- Knowing more about the quality distribution of the applicant pool can enable an institution to calculate with more precision the likely impact of a change selectivity on quality.
- Understanding trends in the applicant pool itself is also important.



# Understanding Tradeoffs: Size Versus Profile (cont'd)

## Simple size/quality tradeoff model

	Fall 2004				Fall 2005			
	#	Admit %	Yield %	Avg. SAT	#	Admit %	Yield %	Avg. SAT
SAT >1200	150	100%	25%	1250	200	100%	25%	1250
SAT 1000-1200	250	90%	35%	1100	300	90%	35%	1100
SAT 900-1000	250	75%	45%	950	300	75%	45%	950
Sat <900	200	25%	55%	890	250	20%	55%	890
Totals (#)	850	613	228	1044	1050	745	273	1051



# Understanding Tradeoffs: Program Mix Versus Profile

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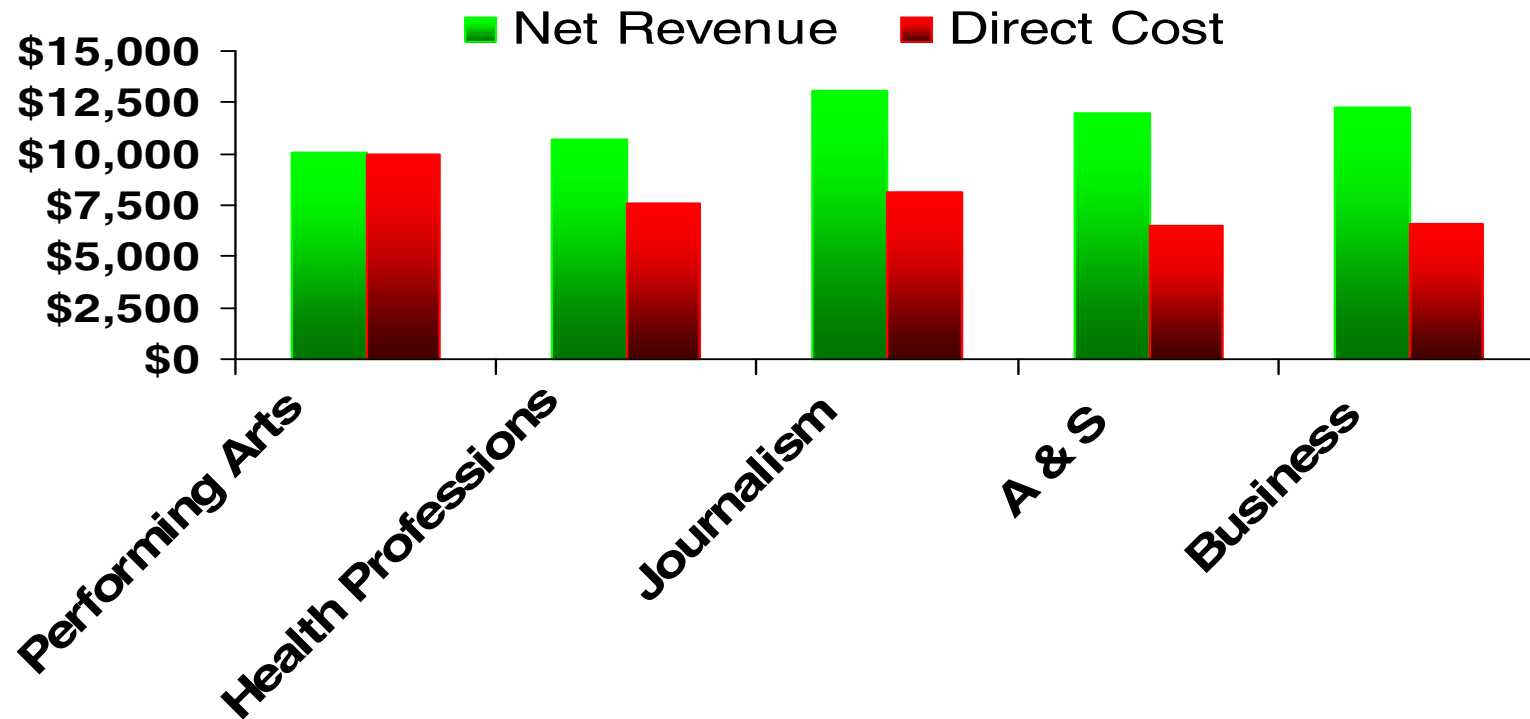
- Lower profile students may be disproportionately represented in some programs. Decisions to change profile need to consider the impact on those programs.
- Similarly, increasing average SAT scores may be more possible if enrollments in some currently capped programs were increased and enrollments in other programs decreased.
- However, the cost of education also varies significantly by program.



# Average SAT by School

School	Average SAT 2001
Performing Arts	1240
Health Professions	1156
Journalism	1223
A & S	1150
Business	1121
Total	1167

# Net Tuition Revenue per FTE Student versus Avg. Annual Direct Instructional Cost -- By School



Net Tuition Revenue = Tuition – Institutional Grant Aid



# Understanding Tradeoffs: Enrollment Goals Versus NTR

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- External drivers
  - Changes in family ability to pay
  - Changes in federal or state policy
- Short-term tradeoffs
  - Institutional goals for quality, diversity, program mix
  - Freshman versus transfer
- Long-term tradeoffs
  - Competitive position
  - Changes in family willingness to pay



# Enrollment Goals Versus NTR-- External Drivers

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- Trends in the percent of enrollees demonstrating financial need and in the level of need
- Trends in unmet need
- Net price as a percentage of average family income in primary market area  
*(See Nathan Dickmeyer, "10 Questions About Tuition and Financial Aid", Trusteeship, January/February 2004.)*



# Enrollment Goals Versus NTR-- External Drivers

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- How dependent is your total aid program on federal and state sources?
- How will your institution be affected by proposed changes in those programs?
  - New calculations for Pell eligibility
  - Changes in allocation formulas for campus-based aid
  - Changes in state aid funding (CA, TN, IL)

# Sample External Grant “Dependency” Chart

Types of Grant Aid	Fall 2005 Freshmen		Fall 2005 Transfers	
	Sum	Percentage	Sum	Percentage
Institutional Need-Based	\$1,890,434	12.3%	\$223,044	7.0%
Institutional Merit Based	\$1,872,050	12.2%	\$119,350	3.7%
Institutional Entitlements	\$751,948	4.9%	\$196,378	6.2%
Institutional Athletics	\$704,790	4.6%	\$29,228	0.9%
Institutional Other	\$493,054	3.2%	\$45,006	1.4%
Federal Grants	\$6,484,496	42.2%	\$1,952,872	61.2%
State Grants	\$1,611,430	10.5%	\$389,374	12.2%
Outside Grants	\$1,573,666	10.2%	\$234,130	7.3%
Total Grant Assistance	\$15,381,868	100.0%	\$3,189,382	100.0%



# Discussion

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- How much is known about these external drivers at your institution?



## Enrollment Goals Versus NTR-- Short-Term Tradeoffs

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- Goals for “shaping” the class often need an NTR reality check.
- The groups considered most desirable are often the least willing/able to pay the full price, and consequently generate the least net tuition revenue.

# Sample Net Tuition Revenue Table --Tuition \$21,000

EFC	Non Filers	> 30k	20-30k	15-20k	10-15k	5-10k	0-5k	Average
Quality								
Highest	12,511	12,304	11,975	9,056	5,609	4,960	4,866	8,382
High	17,254	17,237	14,543	10,772	7,888	7,423	7,018	11,270
Medium	18,737	18,997	16,075	10,926	9,128	8,082	8,134	13,178
Lower	20,023	20,104	15,614	11,730	9,740	9,479	9,066	14,018
Lowest	20,044	20,049	16,433	11,651	10,798	10,355	9,684	14,633
Average	18,896	18,071	13,243	10,974	8,813	8,161	7,734	12,665



## Enrollment Goals Versus NTR-- Short-Term Tradeoffs (cont'd)

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- Econometric modeling can help an institution assess the tradeoffs between institutional enrollment goals by
  - Providing information on the price sensitivity of different subpopulations
  - Assessing the maximum NTR that can be generated with the current applicant pool
  - Simulating how much NTR would need to be forgone in order to achieve institutional goals for quality, diversity, program mix, etc.

# Sample Simulation Summary Table

	Total			Avg.		Avg.
	Enroll	Minority	Engineers	SAT	NTR	NTR
Actual Class	656	45	96	1043	6.9m	\$10,457
Optimization (NTR)	675	46	81	1033	7.6m	\$11,299
Increased Diversity	664	64	88	1040	6.9m	\$10,443
More Engineering Students	666	43	109	1045	6.9m	\$10,308
Maximum enrollment	725	45	95	1045	6.6m	\$9,057
Maximum quality	647	40	87	1047	7.1m	\$10,926



# Enrollment Goals Versus NTR-- Short-Term Tradeoffs (cont'd)

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- Advantages of transfers:
  - Higher yields and lower discount rates
  - Enter upper-division classes where there is more capacity
  - Can enable the institution to have more flexibility in shaping the freshman class
- Yet, at many institutions, transfers are an untapped enrollment stream.
- Faculty can play a key role in building relationships with community college feeder institutions.

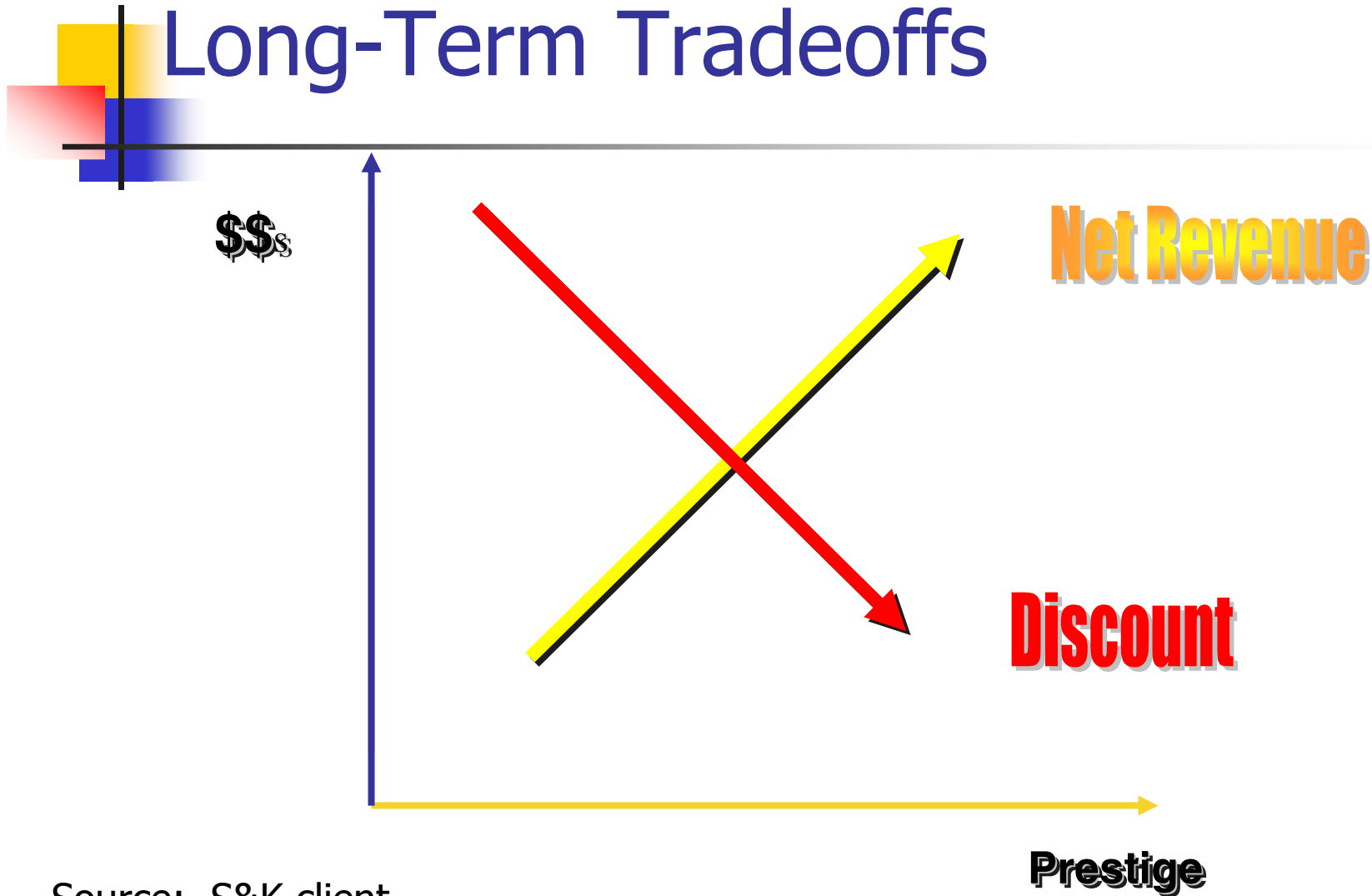


## Enrollment Goals Versus NTR-- Short-Term Tradeoffs (cont'd)

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- Finally, the institution needs to be clear on the issues of capacity and the marginal cost of adding students.
  - If at capacity, the focus should be on tradeoffs between goals and discount rate.
  - If not at capacity, the focus should be on maximizing net tuition revenue, as long as the NTR per student exceeds the marginal cost of educating them.

# Enrollment Goals Versus NTR-- Long-Term Tradeoffs



Source: S&K client

# Enrollment Goals Versus NTR-- Long-Term Tradeoffs (cont'd)



Source: S&K client



# Enrollment Goals Versus NTR-- Long-Term Tradeoffs (cont'd)

- Competitive Position
  - Pick the right institutions for benchmarking
    - SAT/ACT score report overlap
    - Cancel student surveys
    - National Student Clearinghouse data
    - Beware of using aspirant or target institutions
  - Note the correlation between sticker price, discount, and a set of “prestige” measures.



# Sample Benchmarking Chart

	Tuition & Fees	Discount Rate	Estimated NTR	Accept Rate	Middle 50% SAT	USNews Ranking
# shared SAT scores	2005-06	2002-03				
116	\$19,278	59.9%	\$7,730	75%	990-1220	Masters North (11)
69	\$25,740	43.0%	\$14,672	80%	970-1210	Comp. Bach. North (5)
166	\$30,000	33.6%	\$19,920	35%	1200-1370	Liberal Arts Bach. (18)
125	\$28,948	42.0%	\$16,790	69%	1070-1240	Liberal Arts Bach. 2nd tier
86	\$22,264	38.9%	\$13,603	66%	1080-1260	Masters North (9)
86	\$22,790	50.4%	\$11,304	79%	1060-1250	Liberal Arts Bach. 2nd tier
98	\$24,945	29.5%	\$17,586	35%	1104-1284	Liberal Arts Bach. 2nd tier
75	\$18,095	35.0%	\$11,762	69%	1020-1200	Liberal Arts Bach. 3rd tier
52	\$29,635	26.3%	\$21,841	42%	1150-1320	Liberal Arts Bach. (41)
65	\$28,190	54.6%	\$12,798	61%	1040-1240	Liberal Arts Bach. 2nd tier
105	\$28,928	25.6%	\$21,522	69%	1130-1320	Liberal Arts Bach. (38)
78	\$28,900	28.7%	\$20,606	61%	1100-1290	Liberal Arts Bach. 2nd tier
<b>Sample Institution</b>	<b>\$27,400</b>	<b>39.3%</b>	<b>\$16,632</b>	<b>89%</b>	<b>1010-1220</b>	<b>Liberal Arts Bach. 3rd tier</b>

Sources: College web sites for tuition, IPEDS for discount rate, & *USNews & World Report* for other info.

# Enrollment Goals Versus NTR-- Long-Term Tradeoffs (cont'd)



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- Changes in willingness to pay.
  - Trends in applications and yields on non-aided students versus those receiving institutional aid.
  - Yield trends among highly desirable students.
    - Low need
    - High quality
    - Etc.



# Recruitment Versus Retention Tradeoffs

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- The discount rates for continuing students are almost always lower than for incoming freshmen, yet often less attention is paid to retention than to recruitment.
- Understanding the role that financial aid and other factors play in retention is critical to developing effective intervention strategies.

# Sample Predictive Retention Model

Variable	Parameter Estimate	Explanation
Total Grant	0.0175	For every \$1000 in grant in year one, retention increases by 1.8%.
Unmet need	-0.0345	For every \$1000 in unmet need, retention decreases by 3.5%.
Term 1 GPA	0.1396	For every 1 point increase in Term 1 GPA (e.g., 2.5 to 3.5), retention increases by 14%.
Apply before 2/1	0.061	Students who apply for admission before February 1st are 6% more likely to retain than later applicants
Explore	-0.34	Students entering with no major identified are 34% less likely to retain
Football	0.084	Students participating in football are 8% more likely to retain than other students
SSS active	0.152	Students actively involved in SSS programs during term 1 are 15% more likely to retain than other students with similar academic credentials.

**In addition, students participating in special academic support seminars were all significantly more likely to retain than top scholars when term 1 GPA was held constant.**



# Enrollment Management: It's All About Managing the Tradeoffs

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- Expanding the market base (invest)
- Restricting focus to fewer target markets (reallocate)
- Weighing price versus discount: i.e., institutional repositioning
- Making tradeoff choices between enrollment goals

# Enrollment Management: It's All About Managing the Tradeoffs (cont'd)



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- Given the importance of these tradeoffs to the academic program and mission of the institution, faculty leaders need to play an active, informed role in the process.



# Discussion Questions

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- How much of the data discussed here is available at your campus?
- How are decisions about enrollment goals made on your campus?
- How are faculty represented on the enrollment management committee?